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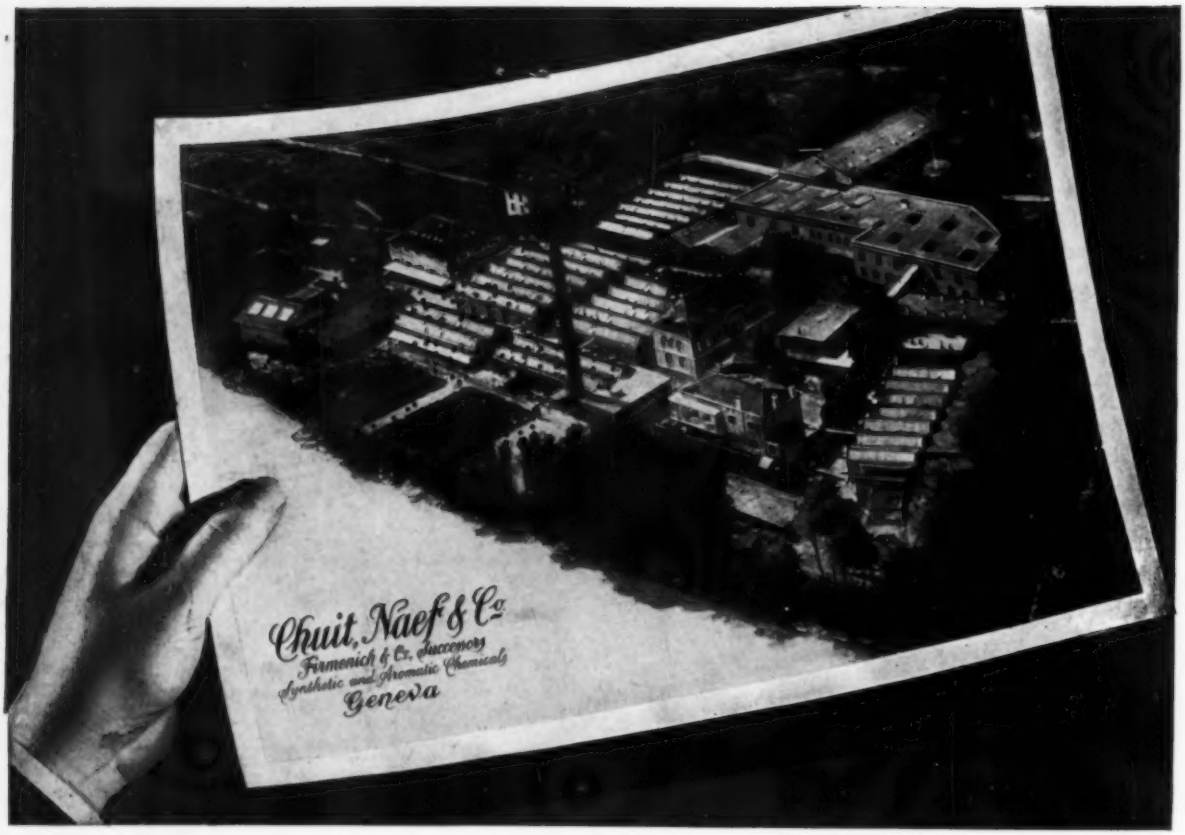

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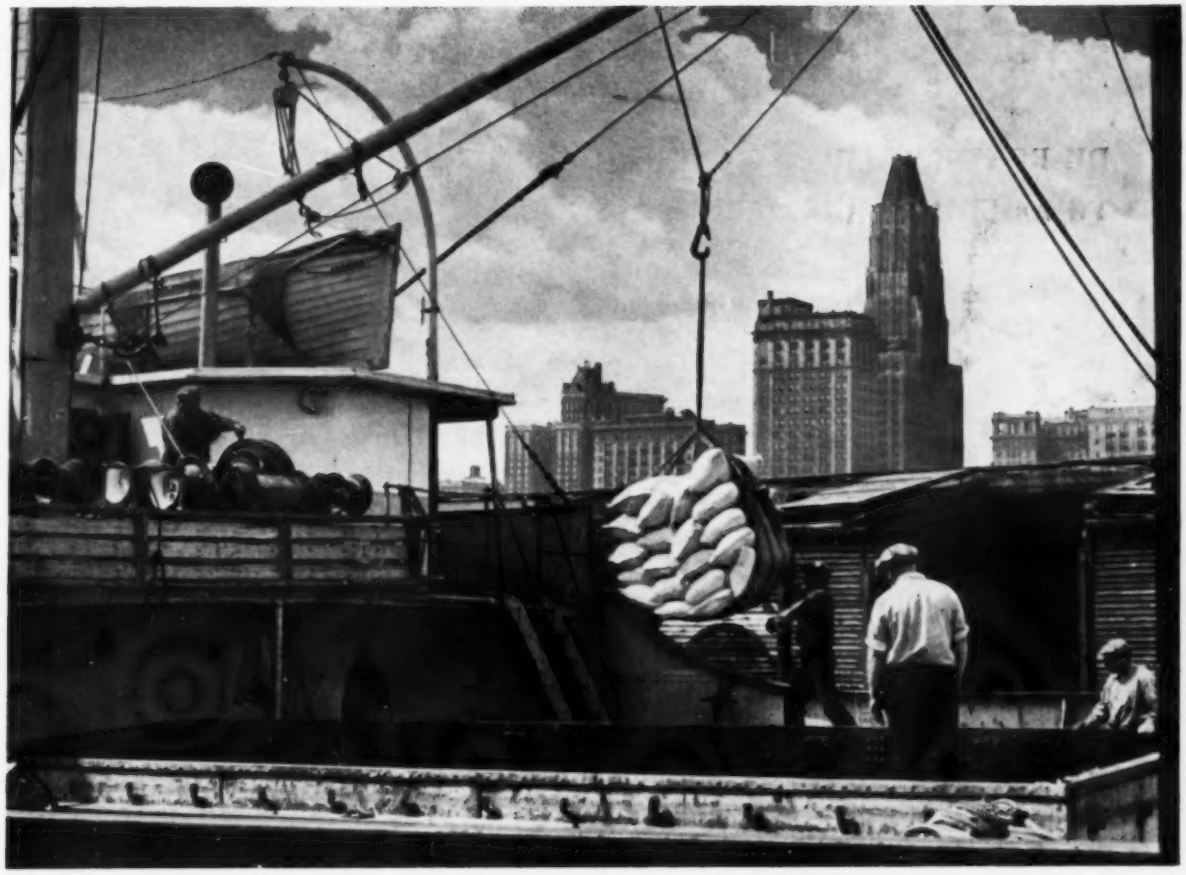

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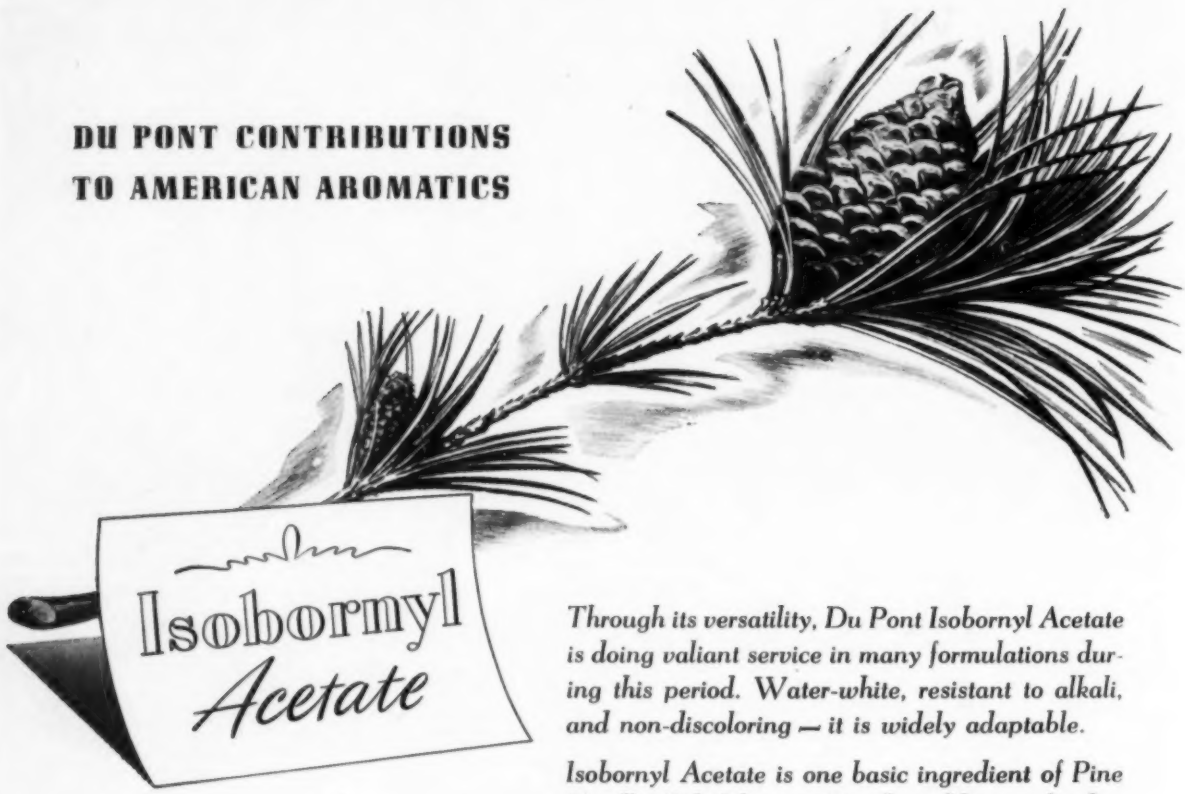

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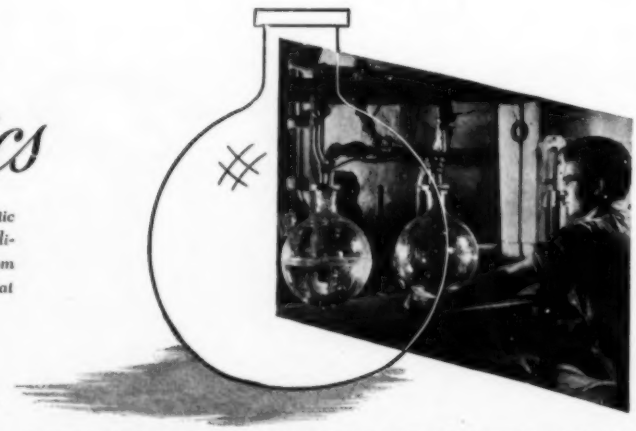

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Volume XVIII Number 7

SOAP and SANITARY CHEMICALS

Reg. U. S. Pat. Office

JULY
1942

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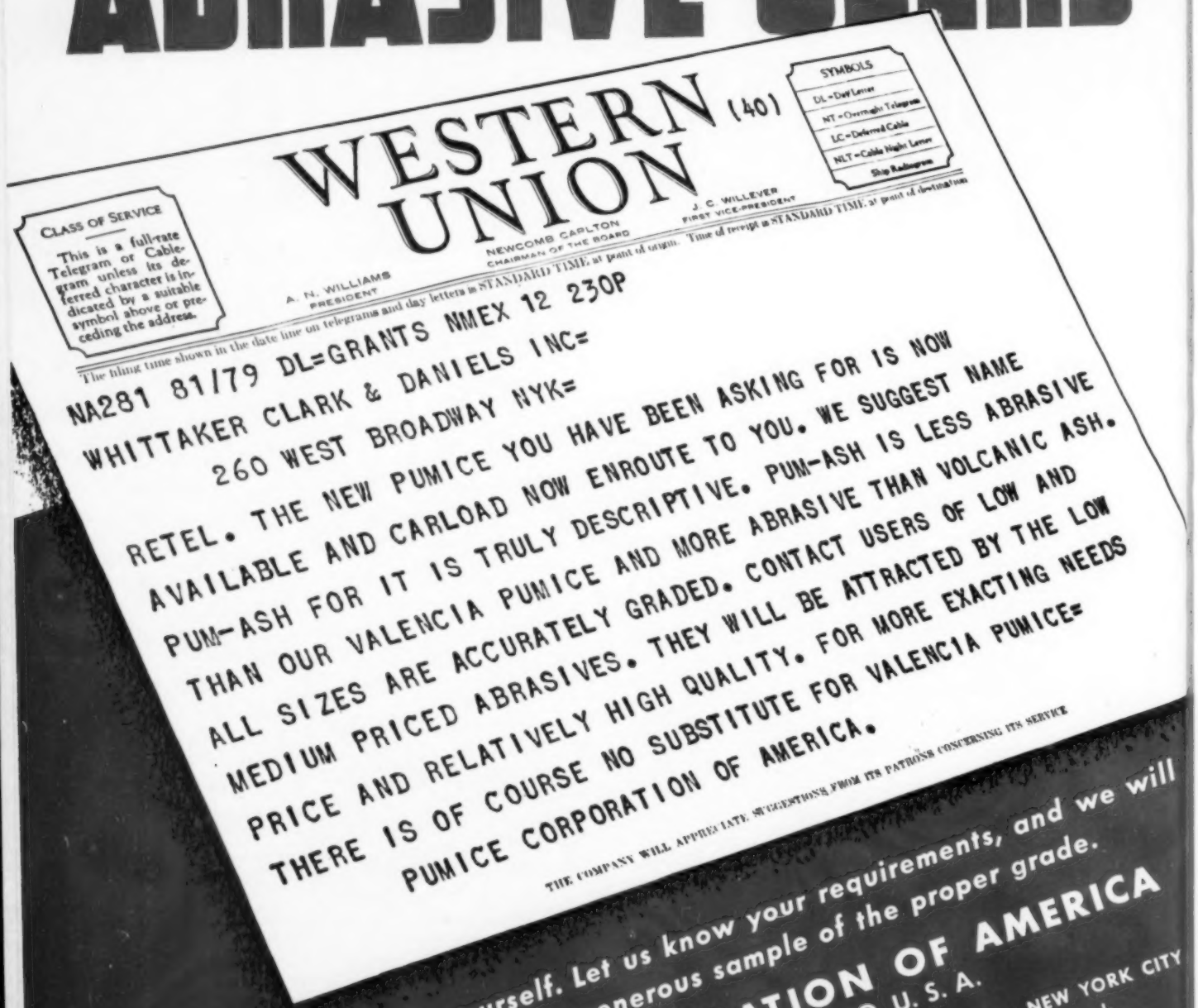

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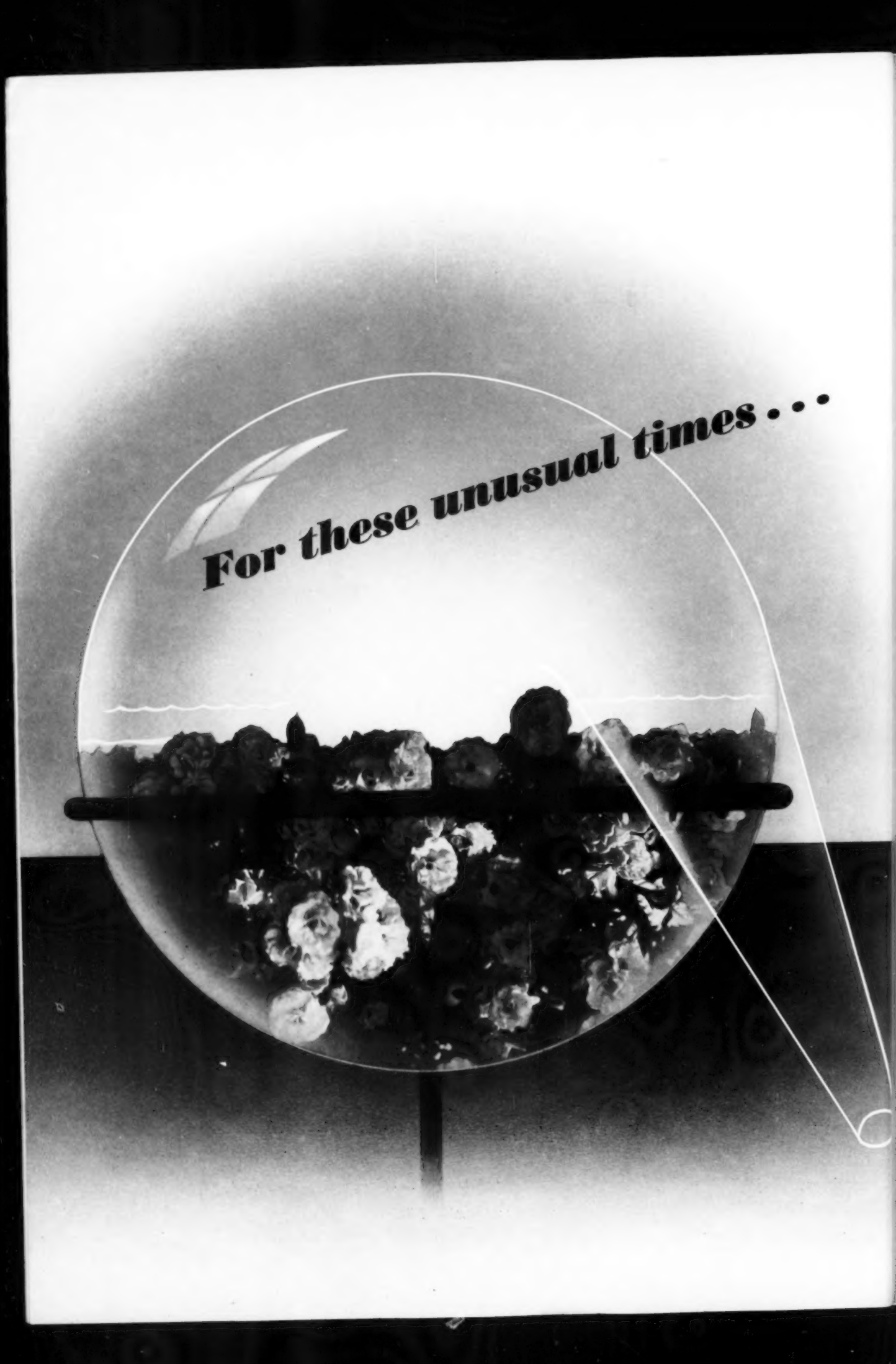
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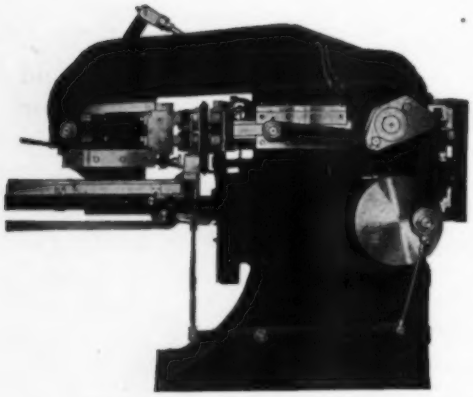

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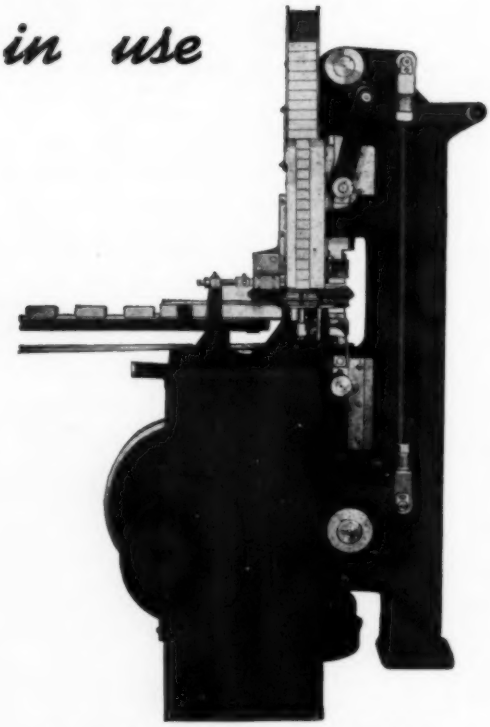

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AS THE EDITOR SEES IT

WHAT is unquestionably the biggest order ever placed for soap is currently being negotiated by the Federal Surplus Commodities Corporation. Bids were opened on July 2 for 66,000,000 pounds of laundry soap, presumably for shipment abroad. Delivery is wanted at the rate of approximately 11,000,000 pounds per month over the second six months of 1942. The order will be split up among a number of soap manufacturers. The industry has been worrying recently about a possible glut of finished soaps on the American market in view of tremendous government demands for glycerin. Perhaps such orders as this, for shipment out of the country, may offer at least a partial solution to the problem.

MAYBE we are unduly pessimistic, but we do not have too much faith in the workings of the household fats recovery and collection plan. The recovery and saving of household and restaurant fats and greases is altogether a messy, unpleasant job. Where the quantity is sufficient as in the case of some hotels and restaurants and the renderer's truck collects the fat, the plan has been working for years. But in the case of household fats where the quantities are usually small and the matter of containers, storage, quality, and other factors are involved, we fear for success. Frankly, we fear that after the first burst of enthusiasm it will be just too much of a nuisance for the average householder, butcher, and other collection agencies to be bothered. To throw rubber, metal, and scrap into a basket for later salvage is one thing. To save grease is very definitely something different. Maybe the idea will work, but we doubt it.

THAT the ire of many soapers has been aroused by the operation of soap price ceilings and the present "squeeze" in which the soap industry finds itself is to be expected. The entire situation is obviously loaded with inequalities and unfairness to the average soap manufacturer. Most of the soapers blame the O.P.A. for their troubles and to some extent they are correct, but the O.P.A. is not the whole cause of their troubles, or in our opinion the main cause. The average soaper is in a jam today—and it took a war-time economy to bring this jam to the acute stage—because his cost figuring and price policies have been faulty for years. He now should know the significance of producing and selling soap made from a five-cent fat while replenishing his inventories in a ten-cent fat market. His excuse for years that competition has forced his hand in this respect will not help any today in keeping red-ink figures off his books.

But to call names, point the finger, and say "I told you so" will do no good. Most soapers are in a jam right now, losing money on every kettle of soap which they turn out. Some, obviously in anger, have discontinued lines and others have refused to sell large buyers who have not been

above taking the maximum advantage of a price ceiling situation which was never intended by the law or by the O.P.A. The fact remains that the O.P.A. is fully cognizant of what is happening and is doing everything in its power to correct the situation at the earliest possible moment. To find a workable means of doing this quickly presents a considerable number of problems, but we feel certain based on "grapevine" information from Washington that a solution will be found and quickly if the soap industry will control its ire, hold its fire and give the O.P.A. half a chance.

IF ROADS could be built into the interior of the South American jungles to bring out the babassu nuts to a point where they may be crushed and the oil extracted, the solution of the present shortage of high-lauric-acid oils would be within our grasp. Such a plan would not only give us ample high-lather oils for our soap kettles, but it would forever free us from dependence on coconut oil and copra from the Philippines and other places half-way around the globe. There are in South America sufficient high-lauric-acid oils for all of our needs if the oil-bearing nuts of the interior could be made accessible. These are the conclusions of at least one member of an investigating committee which recently went to South America to study the situation.

But between oil in American soap kettles and oil in the nuts on babassu trees in the Brazilian jungle, there lies a long period of time to build the needed roads, and the crushing plants, and to equip them, and the facilities for transportation, trucks and tankers. It is a long-term project which we fear could not be completed in time to be of help in the present emergency. Nevertheless, it should not be considered in the light of the present situation alone. The future should be planned now so that whether the Philippines ever ship us another pound of coconut oil or not, our supply of high-lauric-acid oils will never again be cut off.

A REPORT from Washington that soap fats and oils would be allocated by July 1 has not as yet become reality. The information as given was that ninety per cent of the average amounts of fats and oils used in 1940 and 1941 would be allocated on a quarterly basis to soapers. According to the report, an interchange and substitution of one oil or fat for another would be permitted.

As we study over the supposed conditions on which soap fats will be allocated if predictions come true, we are constrained to ask why there should be any allocation at all if nothing more severe than this is required. We all know that fat and oil purchases over the past two years by soapers have been heavy and that ninety per cent of the two-year average represents a far larger tonnage than the average requirements of the soap industry for the past ten years. So, we inquire, why allocation now if the situation is no more acute than these figures would indicate? Is the object to put allocation machinery into operation so that if real and drastic restrictions become necessary at a later date, all will be in readiness for prompt action? If not, we can see no reason for allocation today unless the government wants to make extra work for itself and the soap industry.

The high lauric acid oils appear to be well protected. The Commodity Credit Corporation is preparing to buy back from the soapers that twenty-five per cent of their inventories which was frozen some time back. And after all, it is the lauric acid oils which represent the critical portion of our soap fat situation. Outside of these which have been taken care of, where is there need for allocation, even of the extremely mild kind as outlined in the Washington report?

SOAP PRICE CEILINGS . . .

High fat costs and low soap prices bring serious situation in the soap industry as the O. P. A. searches for a formula to correct inequalities

THE soap industry of the United States is currently confronted with the most serious situation it has ever faced—in the necessity of operating under the General Maximum Price Regulation, more familiarly spoken of as the Price Ceiling Law. The industry could normally be expected to cheer at the prospect of operating with fixed raw material costs, set prices for its soap, and a predictable return for its glycerin, but under the present set-up of fixed costs and selling prices most soap makers, the smaller concerns in particular, see little ahead of them except the prospect of operating in the red—unless some relief is obtained by one formula or another.

What has put the industry in this unenviable position of having its costs and selling prices fixed at immovable levels that dictate net losses before its soap kettles are ever charged? How has it been jockeyed into this unfortunate position of being forced to pay ceiling prices for its raw materials, while rescinding the modest advances in selling prices on finished soaps which in themselves made only the barest start toward compensating for the soap makers' higher oil and fat costs? The tactical error that has led soap makers up this one-way street seems to have been the industry's long established policy of figuring raw material costs on a long-term average.

A similar policy of sales by distributors, based not on replacement values, but rather on cost to them of the soap, has served to aggravate the problem still further.

Instead of changing soap selling prices with every fluctuation in the oil and fat market, the soap industry has long followed the policy of basing its prices to the retailer and distributor on a long-term average of raw material costs. And even when the level of oil and fat prices has definitely advanced, the industry has long followed a liberal policy in its relations with distributors. Against the customary thirty-day terms granted to wholesalers in the food industry, soap manufacturers have quite normally sold from sixty to ninety days ahead. The general policy of the industry has been to give customers liberal time to order additional stock at lower levels before putting indicated price advances into effect. Distributors in turn have based their sales prices on cost rather than replacement value.

It is these policies that have in the present instance turned and bitten the industry in the heel. The voluntary rescinding of moderate price advances by some of the larger soap manufacturers has admittedly taken the "squeeze" off the wholesaler and retailer, but that same "squeeze" is now being felt very seriously indeed by the soap maker—particularly by the small firms with limited opportunities of making reductions in cost anywhere along the line.

The situation, we hope, is not quite as dark as most of the industry seems to feel it to be. The Office of Price Administration is thoroughly cognizant of the serious problems facing the industry and has been working steadily since the first conferences in Washington six or seven weeks ago to perfect a formula for equitable operation under the new law. It has been expected, we are told, that some announcement would be ready for release by this time, offering an acceptable solution to the soap maker's dilemma, but up to this point the OPA plan has not received final approval.

What form it will take, how it will operate, when it will go into effect, cannot yet be told, but from unofficial assurances that have reached us from Washington the industry can perhaps safely season its present pessimistic spirit with the hope that aid of one sort or another will be forthcoming. The continued operation of the industry on some sensible economic basis is highly essential to the war effort, from the angle of glycerin production alone, and those in best position to see the whole picture seem confident that some satisfactory formula will be found, enabling soap manufacturers, both large and small, to continue to make and sell their product without suffering losses that would cause collapse.

The situation surrounding application of the Price Ceiling Law to the soap industry is probably known only too well by the members of the industry, yet it may be worth while to review for the record the sequence of events that have occurred over the past few months. Oil and fat prices, the soap maker's most important cost item, had, of course, been advancing for a considerable length of time be-

fore price ceilings were imposed earlier this year. Figures of the Department of Agriculture show that as of January, 1942, soap fats were up sharply from the levels of January, 1941. Soap prices had advanced but little. In late February and early March a number of soap manufacturers began to put additional moderate price advances into effect—the general average of price increase being in the neighborhood of three to three and a half per cent. These advances were to take effect thirty days or more after announcement.

Meanwhile soap had been selling in unprecedented quantities, with distributors and dealers building up heavy stocks against the day when higher fat costs and the necessity of using more expensive domestic fats to replace coconut oil would eventually force higher soap prices. Sales of soap by manufacturers in the first quarter of 1942 reached the imposing new high level of almost a billion pounds, according to figures based on data compiled by the Association of American Soap and Glycerine Producers. This was some forty-three per cent above average quarterly sales for the five year period, 1935-1939. Soap makers were selling lots of soap —and perhaps netting attractive profits on their actual raw material costs. Figured against oil and fat replacement costs, however, soap selling prices were far too low—being kept low in accordance with the usual pricing policies of the industry, and also perhaps as a means of stimulating consumer buying, so that production could in turn be kept at a high level to stimulate peak glycerin production.

The moderate price advances referred to above had been accepted by many soap distributors, though not by all, but had not generally been passed along to the consumer, when the Price Ceiling Law went into effect in mid-May, fixing maximum prices at the March levels. Distributors and retailers found themselves in a difficult situation as they had held the "hot potato" too long and could no longer pass along the price advance. They howled for relief and went on a buying strike. Sitting back on their heavy accumulation of soap stocks, they refused to buy until they were granted relief. Inaccurate newspaper accounts credited the largest firms in the field with being the first to "roll back" prices to the January levels. This was not the case, however, as numerous other soap makers all over the country had rescinded their advances before the official OPA announcement was released on June 12 reporting such action by Colgate-Palmolive-Peet Co., Procter & Gamble Co. and Lever Bros. Co.

THE full text of the OPA announcement follows. A subsequent announcement, incidentally, emphasized that the action was not in the nature of a joint move, as announced in Washington, but represented rather individual action on the part of the three manufacturers named.

Three large manufacturers producing the bulk of the nation's soap, acting voluntarily in a joint move to relieve a "price squeeze" on retailers, wholesalers and jobbers, today announced rescinding of price rises averaging three and one-fourth per cent posted in February and March of this year.

The three—biggest soap makers in the country—are Colgate-Palmolive-Peet Co., Procter & Gamble Co. and Lever Bros.

Another roll back of major importance, the action carries the prices of soap at their factory doors back to the levels prevailing before February 28, 1942.

The reductions were made at the request of the Office of Price Administration.

For Mr. and Mrs. Average American the lower manufacturers' prices probably will mean no change in the price tags on soap at counters in retail grocery, drug and variety stores.

But for the storekeeper and the jobber who supplies him, the move brings opportunity for a more equitable margin of profit.

The reductions by the manufacturers restore the balanced price relationship that existed before the February-March price rises were announced.

Domestic output of soap totals over $500,000,000 annually.

The three big soap makers are expected to head a long list of manufacturers voluntarily "rolling back" prices to lower levels than those in effect in March, 1942, the price basing period established by the General Maximum Price Regulation.

Additional makers are expected to withdraw price advances of last Spring shortly.

Price Administrator Leon Henderson warmly commended the manufacturers for their action, pointing out that it would assure maintenance of stable prices for the consumer.

The reductions were made by the three companies, it was pointed out, in spite of high cost of fats and oils which constitute their principal raw materials.

The story behind the story of tne February-March price increases, and their elimination by the "big three" soap makers is linked directly to the changing domestic economy under the impact of war.

As the War spread throughout the world imports of cocoanut oil and palm oil, prime ingredients in the manufacture of many soaps, began dwindling. Makers were forced to change traditional soap formulas, replacing cocoanut and palm oils with more expensive domestic fats and oils. Up went production costs.

On February 28 this year, key manufacturers began announcing price rises averaging three and one-fourth per cent, effective 30 days after announcement, in line with industry practice. Others followed during the month of March, so that by the end of that month the rises were almost universal throughout the industry. Retailers, wholesalers and jobbers, however, as a rule, did not post corresponding price rises immediately. They were still selling soap out of stock—soap purchased at pre-rise prices—so continued to maintain their old prices.

At the end of April, with announcement of the General Maximum Price Regulation establishing the highest delivered prices of March, 1942, as maximum prices for commodities and services not covered by specific price schedule or regulation, many soap retailers, wholesalers and jobbers found themselves in a difficult position. They could not, under the law, pass on to consumers in higher prices the February-March advances announced by manufacturers.

Thus developed a "squeeze" situation. Retailers and middle-men were forced to buy soap at higher levels than they paid for stocks sold in March, yet they could not sell the soap at prices to reflect the advances.

Voluntary rescinding of the advances by the "big three" manufacturers today eliminates the "squeeze" so far as their soap products are concerned, restoring to the products a price relationship permitting retailers and middle-men their former margins of profit.

THE action of the soap companies in rescinding the price advances was warmly received by distributors, their position being further improved by action of the soap companies in extending the price "roll back" to apply also on all goods purchased since the advances were first announced. One leading distributor commented "This move by the soap manufacturers takes us back to the point where we are not actually out of pocket on some brands, without counting selling and handling expense, be-

fore the goods ever go on sale. The move is in the right direction." Incidentally, in spite of general satisfaction of soap buyers with the rescinding of price advances, sales of soap have as yet picked up but little, as many distributors are still carrying heavy inventories. Deliveries of soap in April and May were far below previous high levels.

The reaction of some of the balance of the soap industry, however, was, by contrast, decidedly unenthusiastic, to say the least. One leading manufacturer was reported to be eliminating forty of his brands of soap and soap powder from a list of products which had originally totaled in the neighborhood of one hundred. This opportunity to eliminate marginal items in the line is, of course, not shared by the smaller producers who make a more limited list of products. Neither does the smaller manufacturer have the same opportunity to reduce costs by paring advertising expenses as does the larger manufacturer, dangerous to the established position of the larger manufacturer as this might be as a long-term policy.

The attitude of some of the smaller soap firms toward the developments of the past two months is best expressed in the following extracts from letters received from representative manufacturers. A middle western manufacturer writes:

"Quite naturally, soap manufacturers of our size who depend upon selling the bulk of our product without advertising and at a price advantage, are very seriously handicapped by the present ceiling prices. Our large competitors who have always maintained a wider margin on advertised soaps will probably be able to get by, but the smaller manufacturers will have a tough time to remain in business.

"The worst feature of the whole program is the low arbitrary ceiling price set on crude glycerine. We are losing about 2½c per pound on all the crude that we recover. Rolling back our prices on the finished product to January levels will show an actual loss of about 20 to 40c per case on every packaged item that we manufacture.

"Recently a representative of the OPA spoke before the National Retailers Association at their meeting in Chicago, and advised them that the soap manufacturers of the country had patriotically and gladly voluntarily rolled their prices back to a January level in order to take the squeeze off of the jobber and retailer. This announcement was made without any solicitation by OPA to the soap manufacturers, at least we had never heard of it, and the first notice that we had of such a voluntary agreement was publication of the speech made before the Retailers Association.

"Quite naturally, we want to win the war, and my company as well as the entire industry want to contribute everything we can towards that end. However, we cannot see the reason in forcing corporations out of business, especially those making a war product, glycerine, and when the government obviously needs income tax to help pay the war debt.

"We have repeatedly appealed to the OPA for a revision in the ceiling price on crude glycerine. Presently, it is 7c under refined, although for twenty years the refiner has been satisfied with a 3 or 4c margin. We cannot run glycerine down the sewer and must recover 98½% of it under mandatory rulings. The loss on glycerine recovery, plus the loss on the packaged products with January prices, with an inferior quality of raw materials to draw on, and a greatly added overhead expense, all place us in a very unfavorable position to remain in business."

Government to Buy Frozen Oils

Soap companies are currently being advised by the Director of Industry Operations that the government has decided to take over "frozen stocks" of high lauric acid content soap oils impounded under the requirements of GPO M-60. Holders of frozen stocks of oils are being advised that they may sell the oil to the Commodity Credit Corporation or other government agency on terms to be agreed upon.

AN OHIO soap manufacturer writes in a somewhat critical vein as follows: "It is my belief that this new law was made without giving due consideration to the many factors involved with different industries. In the soap business it has always been very difficult to pass on to wholesalers, retailers and consumers, advances in raw material costs as quickly as they take place. There was always a lag of one to three or four months.

"The present acute situation was built up by the terrific increases in raw material prices which occurred in the eight month period prior to the outbreak of war on December 7. It is natural to assume that each soap company, as the rises were taking place, was buying more and more heavily and that current prices in October-November did not reflect the increased raw material costs current at that time. In other words, they were selling in November products that were based on August-September period raw material costs.

"Then, as you know, on December 12 the Government put a price ceiling on the principal fats and dated ceiling prices back to an earlier period, when soap fats and oils were selling at less than the quotations current on December 12. A week or so later, prominent members of the Southern bloc of Congressmen and Senators voiced the opinion that this raw material price ceiling was too low. Despite the fact that cottonseed oil was selling at parity, or better, they felt that the producer ought to get more money. Irrespective of the Government's new formula for arriving at parity, they stated they were

going to get more. This caused producers and renderers to withhold any offers at the ceiling, and for a period of several months soap manufacturers were able to buy only small lots of fats at the ceiling prices, despite the fact they made daily offers.

"During the interim between December 12 and March 31, soap manufacturers attempted to stabilize their prices to the new price ceilings, and following a custom of many decades' standing, they permitted their dealers to buy up to limited quantities, in accordance with the dealers' previous purchases at the old prices. These dealers then were selling in March at a retail price that reflected the old prices before the increases or adjustments to bring the items to the proper level, with the result that many retailers' prices were lower than the manufacturing cost to the retailer during the month of March.

"The Federal Government, in attempting to force the manufacturers' prices back to those prices existing in the December-January period, did this without any consideration whatsoever for the condition which they had originally brought about by the imposition of raw material price ceilings on December 12.

"It is my feeling that OPA should recognize the factors enumerrated above and there should be an honest and equitable adjustment that will permit soap manufacturers to more truly represent their costs, even though they have to do so at a smaller margin of profit. Unless this is done the soap manufacturer will be able to continue to operate only at a loss, and that only up to the extent of the surplus that he has built up.

"Operations at a loss will not permit any taxes to help pay for the cost of the war, other than the various processing taxes on the raw materials and it does seem as though the new price ceiling law, which is supposed to operate to keep the cost of living on an even level, will ultimately operate to the disadvantage of the Government in securing new funds which are so badly needed."

A somewhat less pessimistic view of the situation is taken by a well-known firm in the East. Offering several suggestions on ways in which the industry might try to make adjustments to ease the problem of operating under price ceilings, this manufacturer writes as follows: "There isn't any question that as far as the normal conduct of the soap business is concerned the price ceiling will have a very revolutionary effect. I might say even perhaps a disastrous effect, if the soap manufacturers do not take the proper measures to overcome their difficulties.

"When we consider the necessary spread between the actual production cost and the ceiling price in order to maintain an advertised brand and in order to maintain an efficiently operated factory and in order to continue improvements and new methods which is a part and substance of our progressive industry—when we consider all this, we know that a good deal of this margin has been taken away. Increased cost of raw material, the increased labor cost and the roll back in price must lead to a narrow margin of gross profit.

"Soap manufacturers are, therefore, faced with the absolute necessity of reducing their costs. Those who have advertised brands and, of course, most of the volume in the soap industry is in advertised brands, will simply have to cut their advertising costs, also their sales and distribution costs of all kinds such as sampling, cooperative advertising, etc. They will also have to cut some of their sales expense involving check-ups, statistical data, etc.

"If all of the companies will do this simultaneously on a more or less proportionate basis, they will really not suffer much. Should all the manufacturers be satisfied to hold their present position for the duration of the war, I do not see where there can be much harm done. They will all save a proportionate amount of money and it will enable them to weather the storm.

"Second, there isn't any reason why the soap makers should have to pay the ceiling prices on tallows. If the large soap manufacturers could only make up their minds to stay out of the tallow market for a few weeks, tallow would drop perhaps a cent to a cent and one-half per pound which would immediately place the soap industry in a position to take up this roll back without too severe a strain.

"This would also help the smaller soap manufacturers who have no advertised brands. Their margin of profit has always been much narrower. They have no advertising expense on which they can make a saving and while they may cut corners and save a little here and there as we all must do, their biggest saving would come from a lower price on tallow."

THE immediate problems imposed by operation under price ceilings are serious enough, but the future seems to offer still further complications. Heavy soap production will doubtless have to continue, to assure maximum glycerin output. There is little prospect that soap sales can continue at the heavy rate of late 1941 and early 1942, which may mean pressure on soapers to increase their own stocks of soap. Such a policy will require heavy capital investment, and if a trend develops in this direction firms with limited capital, and marginal producers, are very likely to find continued operation an even more serious problem than it is already.

Some solution to these problems will have to be found, and informal assurances are being heard that the OPA is turning every stone to reach the most sensible, equitable and workable solution. Allowing soap sales above the price ceilings has been eliminated from consideration in advance, as has any reduction in the price ceilings on oils and fats, although this is a solution that some have urged. Wages cannot be touched, nor can the ceiling price on glycerin. Changes in quality of soap or size or weight of cakes or packages also seems to be out. This leaves direct or indirect government assistance, in one form or another, as the most logical remaining possibility—and the only apparent hope of the average soaper unless the price of oils and fats can in some way be reduced.

In the direction of government assistance as a solution to the problem, it may be of interest to note

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ROADS for MARANHAO...

seen as the key to increased South American babassu production—bringing an end to the shortage of high lauric acid content oils for the American soap kettle

WITH the American soap industry cut off by the fortunes and necessities of war from the ample stocks of coconut and palm kernel oils on which they have depended for years, the industry has looked hopefully to South America to solve the shortage of high lauric acid content oils by increasing on short notice its shipments of babassu oil and babassu kernels. With the purpose of checking on the possibilities from this direction, encouraging Brazilian government and industry to start at once on the necessary expansion program, and finding out at first hand how the United States can assist in speeding up this program, a Vegetable Oil Mission representing the United States has recently completed a trip through the babassu producing areas of Brazil. This report by one of the members of the commission is offered to American soap makers, so that they may know the present situation, so that they may be advised of the future possibility of relief from increased imports of oils and fats from South America, and so that they may exert their influence to ensure that the program will not fail simply as a result of failure of the United States to take the logical steps to encourage this expansion program.

Some discussion of pertinent facts is required to lay the ground work for our survey of Brazilian oil and fat production. Brazil has an area of 3,275,510 square miles, i. e., it is as large as the United States with an extra Texas thrown in. In it dwells a population of 45,000,000. It has only 21,750 miles of railroads as compared to 235,000 miles in the United States. It has 140,430 miles of traffic highways as compared to over 2,000,000 miles of state roads in the United States and an additional million miles of county roads.

President Vargas of Brazil (head of table) met with the U.S. Vegetable Oil Mission on their recent visit to survey the Brazilian oil and fat industries.

I went to Brazil as a member of the United States Vegetable Oil Mission and as the guest of the Federal Government and of the various State Governments. My main interest in accepting the invitation was to inspect the babassu producing area. I had no preconceived ideas except possibly that the gathering of babassu kernels would never be a pronounced success until an effective cracking machine was invented, a belief which I no longer entertain.

Brazil possesses babassu in unlimited quantities. These great palms spread in a seemingly limitless green blanket over great areas in the States of Para, Maranhao, Piaui, Goiaz, Mato Grosso, Amazonas and Minas Gerais. For countless years forest animals have been carrying the nuts about and burying them, just as our squirrels bury hickory nuts and acorns. From these unretrieved nuts trees have grown. Others spring from water borne nuts, just as coconut trees have reproduced themselves along the shore lines of the atolls of the South Pacific. Other trees grow from the nuts which fall from the parent tree, closely crowding it and its many neighbors.

Thus, the babassu once established dominates the landscape in a few years time. Unlike the coconut tree, it has no particular fondness for the shore line. It flourishes just as well 2,000 miles within Brazil as it does where ocean breezes reach it. It asks only two things of nature, i. e., that it receive a fairly generous rainfall and that the ground on which it grows be

By John B. Gordon

Bureau of Raw Materials American Vegetable Oils and Fat Industries

Stand of babassu trees which dominate the landscape of Maranhao.

moderately low, although, just as does the coconut, it does not hesitate to ascend moderate sized hills.

The tree bears five to six stalks or clusters of nuts. The number of nuts thereon will average around 150. Some have as high as 200. Well developed nuts will weigh around one-half pound. Especially big specimens I have seen from Goiaz weighed as high as one pound. An average sized cluster will weigh 75 pounds. There are from two to six kernels in a nut.

The areas of greatest concentration which are at the same time the most readily accessible are in the States of Para, Maranhao and Piaui. All front on the seaboard, whereas the other great concentration areas are in the interior. Para has an area of twice the size of Texas and a population of only about 1,700,000. It, therefore, has a labor problem which is complicated by the fact that rubber and high priced Brazil nuts have first call on the labor supply. This greatest of the untapped sources of supply of oilseeds in Brazil must, therefore, be passed over for the immediate present in favor of its next door neighbor, Maranhao, although attention will eventually have to be paid to this ample storehouse.

MARANHAO is called the babassu state because its babassu groves so dominate the landscape as to overshadow all other plant life. Authorities estimate that there are 1,000,000,000 babassu trees in Maranhao. The theoretical kernel yield of this vast aggregate of trees is far in excess of 10,000,000 tons per annum. This state has in excess of 1,300,000 population. About 75,000 are presently engaged in harvesting babassu kernels, so the state has labor resources in reserve.

The entire family of the Brazilian "caboclo" is pressed into service to crack the babassus.

Maranhao has something else in its favor, a government which is keenly alert to the importance of developing its greatest natural resource. Indeed, its Interventor (corresponding to the Governor of a territory such as Hawaii) has the nickname of "Babassu" so earnestly does he pursue his objective.

Maranhao has two seaports: Sao Luiz and Tutoia Bay. It has a federally owned railroad running across the southeast corner of the state connecting Sao Luiz, the capital of Maranhao, with Terezina the capital of Piaui. True, it is in a very run down condition at present, but as a result of the visit of the Brazilian-American Vegetable Oil Mission it will soon be rehabilitated.

What then does the State lack? It lacks highways. Put these highways in and the United States will soon have several hundred thousand tons of babassu kernels containing 67 per cent oil available for the production of a high lauric acid oil practically identical to coconut oil in chemical composition. It is precisely that simple.

Soon after our arrival in Sao Luiz, the capital of Maranhao, from Belem do Para, the Interventor called a conference of all his state officials, the exporters, the Chamber of Commerce, his Highway Commissioner, the Director General of Railroads and the members of the Brazilian-American Vegetable Oil Mission.

The Interventor started the ball rolling by making a lengthy address, the gist of which was that if we wanted babassu kernels we had come to the right place to get them. He told us that ample supplies could be counted

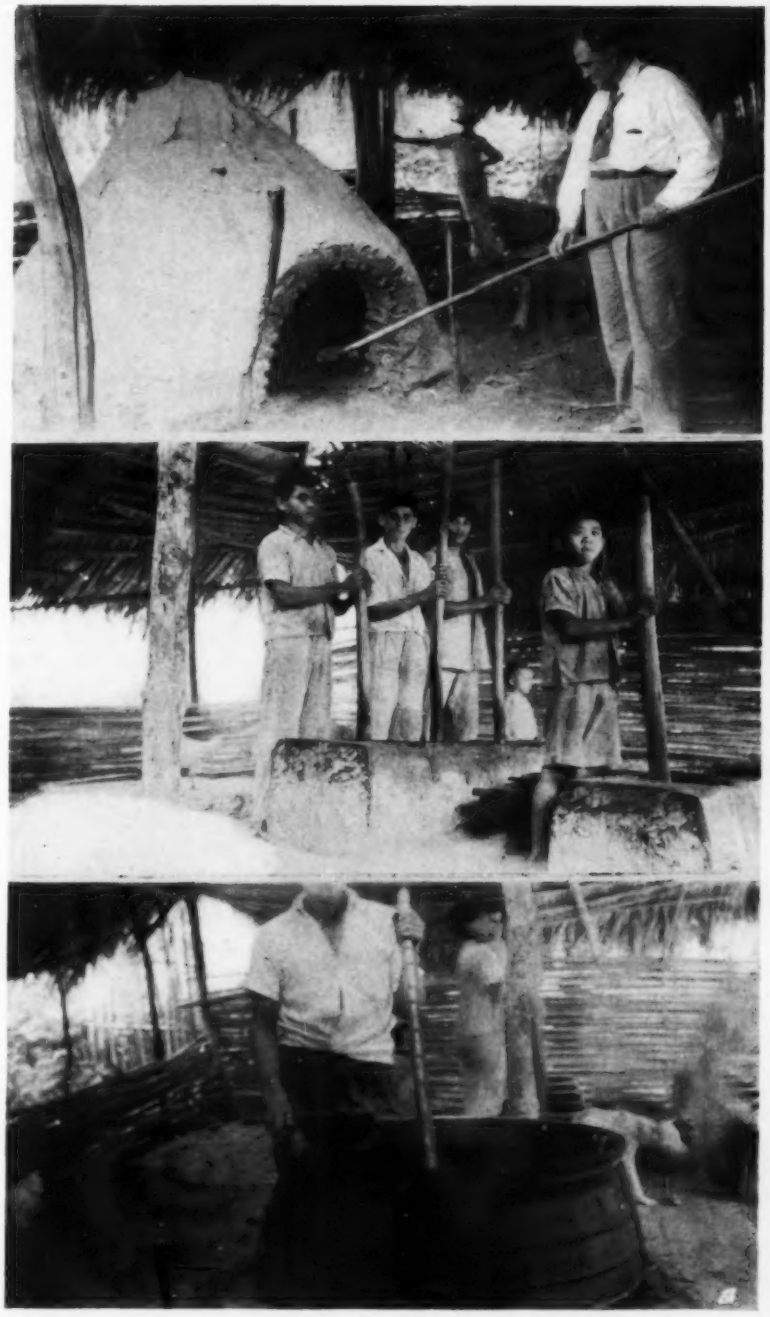
on if three necessary requisites could be conformed to:

1. An adequate price. He stated that the present price of $125 per ton was eminently satisfactory — that they did not want more.
2. Proper transportation: (a) by railroad; (b) by highway and by railroad and highway; (c) adequate river transport.
3. Adequate ocean freight space. On this latter score the Interventor stated that Maranhao would have exported a far larger volume of babassu kernels if ocean freight space had been available when needed.

The Interventor then called upon his Highway Commissioner for a statement as to what he needed in the way of roads to get babassus into the two seaports of the State of Maranhao, viz., Sao Luiz and Tutoia. The Highway Commissioner, Philuvio de Cerqueira Rodrigues, not only told us what he needed in the way of roads but demonstrated how he was building them.

Sr. Rodrigues' plan involves (1) a special Highway Plan; and (2) a complementary (or supplementary) Highway Plan. Plan (1) would be financed by North American importers. Plan (2) would be financed by the State of Maranhao. Plan (1) would embrace a total of 2,294 kilometers, of which 718 kilometers would be first class highways and 1,592 kilometers, second class highways.

The cost of plan (1) would be about $1,742,600 and would require 18 months for completion, 7 units of road making equipment and the accompanying road gangs. Since the road machinery at present in use in Maranhao is all of the finest type of American road building equipment, priorities would be required. The cost of plan (2) was estimated at about $597,000 and would embrace a system of supplementary highways which would not only aid in tapping all of the babassu kernel producing regions of Maranhao, but also by reaching to the Tocatins River to draw the babassu kernel production of the State of Goiaz into the ports of Maranhao. This is highly important as the production of this state otherwise must follow a long and tortuous journey down the Tocatins River into the Para River and thence to Belem.



Crushing babassu kernels in a primitive oil mill in Piaui. Oil produced by this primitive equipment is of course, consumed only for local use in the far interior regions. Before maceration the kernels are baked in an oven. They are next charged into holes hollowed out in logs and crushed to a pulp by pounding with wooden pestles. Oil is then boiled out of the crushed babassu kernels in a kettle and recovered.

It should be kept in mind that the Federal Government of Brazil does not assist the State Governments in building highways unless they are required in the national defense. The State of Maranhao is poor because it has very little in it except a billion babassu trees. They yield no revenue unless the nuts reach the market and if the United States wants the babassus

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METALLIC SOAPS . . .

Their manufacture and use . . .

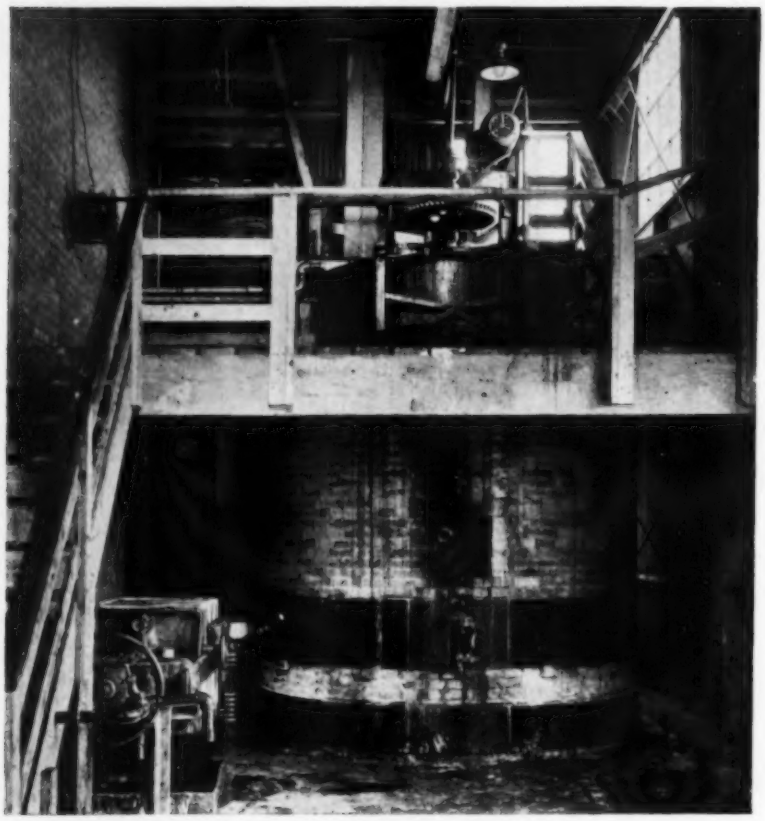

Figure I

By Stanley B. Elliott
Ferro Drier & Chemical Co.

TO THE manufacturer and user of ordinary household soaps, the so-called "metallic soaps," derived from metal radicals other than sodium and potassium, seem to have little connection with soaps as they know them, for the part they play in detergency is commonly very small. The "metallic soaps" are for the most part manufactured by a completely different group of firms, they are used for different purposes than sodium and potassium soaps, and sold through different channels to a quite different group of buyers. Yet soaps they are, by definition and by the chemistry of their manufacture.

In the present situation, with manufacturers of household soaps turning to fatty acids as substitutes for restricted oils and fats, it is interesting to recall that to a considerable extent metallic soaps account for much of the progress that has been made in the manufacture of fatty acids over recent years. Largely because manufacturers of metallic soaps have been expanding their use of fatty acids over recent years, an industry has been built up which in the emergency today can step in to supply the manufacturer of household soaps as well with needed raw materials. Besides this present close association of raw materials for both household and metallic soaps, there is a similarity all along the line in the chemistry of their manufacture and use.

Though a number of discussions of metallic soaps have been published in recent years, there has been a tendency to consider the various soaps as individuals rather than as members of a versatile, interesting family. In part this difficulty has arisen because of the inherent complexity of these compounds. Not only are they prepared from natural raw materials, and thus subject to all of the variations common to such substances, but also they contain varying amounts of impurities, have varying acid values, and often are prepared by various methods.

Of prime importance in any consideration of metallic soaps is the nature of the raw materials available. Raw materials suitable for the anion or organic portion of the soap molecule must come from natural sources if the cost of the soap is to be kept reasonable. For this reason the acids or their glycerides available for use are of considerable importance.

There are six important types of materials available today as sources of the organic anion for metallic soaps.

1. Glycerides of mixtures of saturated and unsaturated fatty acids. These are naturally occurring oils such as corn oil, linseed oil, soy bean

oil, palm oil, etc. For different oils the ratios of the different acids vary widely, though they remain fairly constant for a given oil.

2. Essentially pure saturated fatty acids. The "Neo-Fat" series of acids produced by Armour & Co., has made available commercially for the first time many of the saturated fatty acids in purities of 90 per cent or better. The soaps of such acids have many possibilities.
3. Mixed fatty acids. Mixed fatty acids are produced by splitting the naturally occurring glycerides and then purifying the resultant products. The acids are present in almost the same ratio as in the original oil.
4. Naphthenic acids. These are principally monocarboxylic alkylated ring compounds obtained as by-products in the processing of certain petroleum crudes. The solubility of the soaps of these acids is outstanding.
5. Rosin. Rosin consists of a complex mixture of tricyclic unsaturated acids of which abietic is one of the most important. Though the acid value is low, the great quantity available and the reasonable price makes these acids of great interest.
6. Tall oils. Tall oils are mixtures of rosin acids, unsaturated fatty acids, and sterols and are produced as a by-product of the sulfate paper pulp industry. Though the acid value is low, other factors make this material of value.

A water solution of a suitable metallic salt is used to prepare precipitated metallic soaps. The only requirement for the salts with which to prepare the common soaps is that they shall be reasonably pure, shall be adequately water soluble, and shall possess an anion such that it shall cause no difficulties if a small amount is retained in the finished metallic soap. These requirements ordinarily offer no difficulties.

Fused soaps, prepared by fusing an oxide, hydroxide, carbonate or other salt into a fatty acid, require compounds of high purity, proper chemical nature to insure reactivity, and satisfactory particle size such that complete reaction is secured.

THE manufacture of metallic soaps falls naturally into two important procedures, namely, precipitation or fusion. Both are important, the choice of method depending in large measure on the type of product desired.

Precipitated soaps may be formed because of the slight water solubility of metallic soaps. Thus, on reacting the water soluble sodium soaps of a monovalent organic acid of sufficient complexity with the water soluble salt of a heavy metal or alkali earth metal, a metathetic reaction occurs as follows:

$$M\,So4 + 2\,Na\overline{Fa} \rightarrow M\,\overline{FA}_2 + Na_2So4$$

Where $\overline{FA}$ is the anion of a monovalent organic acid and M is a divalent metal. A soft plastic mass is produced if a low melting point soap is precipitated and a very fine particle if a high melting point soap is formed. The sodium soaps to be used in such a reaction may be prepared by the saponification of a glyceride, thus:

$$C_3H_5\,(\overline{FA})_3 + 3\,NaOH \rightarrow C_3H_5\,(OH)_3 + 3\,Na\overline{Fa}$$

or by the neutralization of an organic acid, thus:

$$H\,.\,\overline{FA} + NaOH \rightarrow Na\overline{FA} + H_2O$$

Since precision chemical control is necessary if acid value, metal content, and viscosity are to be kept within rigid limits, ingredients must be exactly measured.

Soluble salts or alkali soaps, proven to be extremely undesirable in organic finishes, must be kept at a minimum in the finished metallic soap. Therefore, to produce low melting point soaps special agitation equipment, not available when earlier drier plants were built, is used so that objectionable soluble impurities may be completely removed by washing. Dehydration of low melting point metallic soaps is also carried out in special equipment such as that shown in Figure I so that scorching, discoloring, and objectionable oxidation of the soap does not occur. Finally, the molten anhydrous soap is analyzed to insure proper physical and chemical constants, cut with solvents or not,—depending on the type of product desired, clarified, and packaged.

High melting point soaps which are precipitated, as particles having a predetermined size distribution, rather than as plastic masses, require con-

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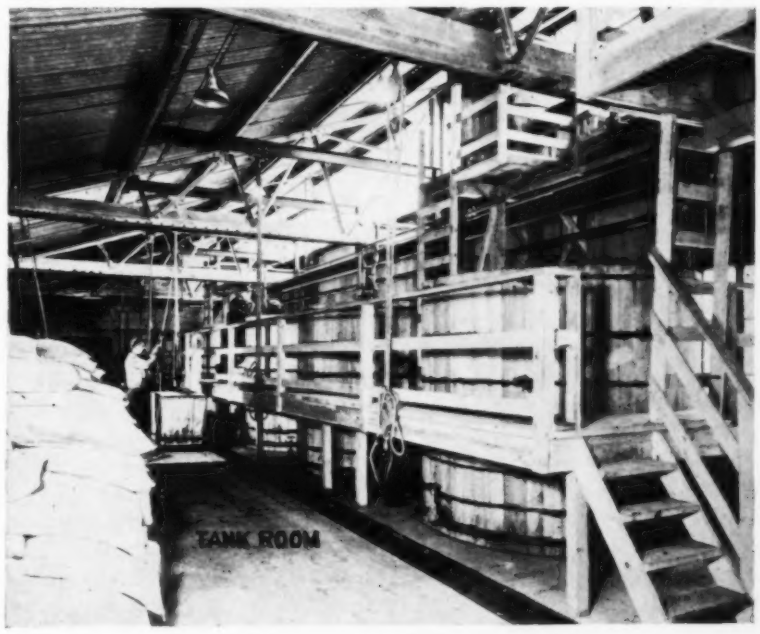


Figure II

BRITISH SOAP INDUSTRY

. . . after three years of war

HOW has the British soap industry been holding up after nearly three years of war? How have the shortages of soap oils, of packaging materials, of plant and office personnel been met? What readjustments have been necessary by soap manufacturer and consumer as a result of soap rationing? What has happened to prices under the stimulus of rising war-time costs? The accompanying article gives some idea how the British soap manufacturer has attempted to solve these and other problems arising from the war. The author is an Englishman who has had long and varied sales experience with American companies, including two direct selling organizations of international fame. He is now sales manager for a large American soap firm operating in Great Britain.

THE most serious problem that the British soap manufacturer has had to face over three years of war-time operation has been a shortage of soap making oils and fats. Great Britain normally imports almost its entire oil and fat needs—both for edible purposes and for industrial uses, including soap manufacture, as well. With every foot of cargo space urgently needed for food and war necessities, it was obvious at an early date that stocks of oils and fats which could be spared for soap making would have to be limited. The supply problems of the British soap manufacturer have thus been vastly more serious than those faced by the American soap maker, with his tremendous available supply of domestically produced oils and fats.

The British soap industry would doubtless have suffered even more, had it not been for the urgent need of the British Ministry of Supply to get every possible available pound of glycerin. A licensing system has been applied to the British soap industry, and holders of licenses have been allowed to draw from the national oil and fat pool, raw materials in quantities equal to their pre-war consumption. From these carefully metered stocks soap makers have been allowed to make only a limited number of types and brands of the various soap products. Soap weights have been standardized since February, 1942. Formulas, too, have been subject to control. In spite of all these restrictions the high quality of leading brands has been well maintained.

The civilian population has for some time been rationed on its soap purchases, with each person allowed each week the equivalent of any one of the following units:

Hard Soap .... (factory weight)	4 oz.
or	
Toilet Soap	3 oz.
or	
Soft Soap	6 oz.
or	
"No. 1" Household Soap Powder (containing 28%-56% of anhydrous soap)	6 oz.
or	
"No. 2" Soap-Powder..... (containing 6%-28% of anhydrous soap)	12 oz.
or	
Flakes or Chips..... (containing more than 56% of anhydrous soap)	3 oz.

Though in short supply, it has not up to this point been considered necessary to ration shaving soap, shampoos, dentifrices, abrasive soaps or scouring powders.

Since the war began dealers have had their supplies of soap limited to accord with the amount of their purchases during the first eight months of 1939. Consumer rationing brought no change in this arrangement.

Though this system is fair, it does not secure complete equity of distribution. Take a typical example:—A grocer with his business in a growing manufacturing town has more than doubled his turnover during the war. Nine hundred families are "registered" with him, buying practically all their rationed groceries in his shop. The grocer buys all rationed goods except soap, in strict proportion to the number of his "registrations." Yet because his pre-war soap buying record was comparatively poor, he can buy only 30 per cent of his justifiable needs. Seventy per cent of his regular customers must seek their soap rations elsewhere.

Soap ration coupons are simply cancelled by the retailer concerned and are not cut from the ration books. This plan, coupled with the lack of correlation between rationed retailing and trade buying, provides a "black market" loophole for the unscrupulous trader.

So far, dealers' war-time purchases have about equalled their pre-war quantities, yet the demand is so

British Official Photos.

Bomb-scarred House of Parliament typifies British spirit of resistance to attack. Bombing, incidentally, has been responsible for but a small part of the decrease in soap sales volume. Dealers, bombed out, have promptly reopened elsewhere.

great, due to disappearance from the market of many lesser known brands, increased consumption, suspected hoarding, etc., that any one of our 300 salespeople could easily sell his restricted quota several times over.

Prices are fixed at an average 10 per cent above pre-war levels. Toilet soap and toilet preparations generally, are subject to a 33-1/3 per cent tax based on wholesale value, and paid wholly by the consumer.

From 10 to 15 per cent of the small shops (a slightly larger proportion in the London area) have gone out of business. Causes are varied but are mainly, decreased profit margins, insufficient supplies or capital, shifts in population, official "telescoping" of businesses, and mobilization. Practically all dealers bombed out of their premises have been able to re-open elsewhere, thus our losses in this particular regard have been very slight.

Collection problems are simpler than in the days before the war. With few exceptions dealers pay for goods within 29 days of delivery. Since price cutting has almost disappeared, new accounts refused, unsatisfactory accounts closed and stricter collection methods used, bad debts are rare. Thousands of soap buyers who had habitually waited for the salesman's visit before making payment, have now been educated to remit direct.

The paper and cardboard situation has steadily deteriorated. Only re-

(*Turn to Page 67*)

New Products

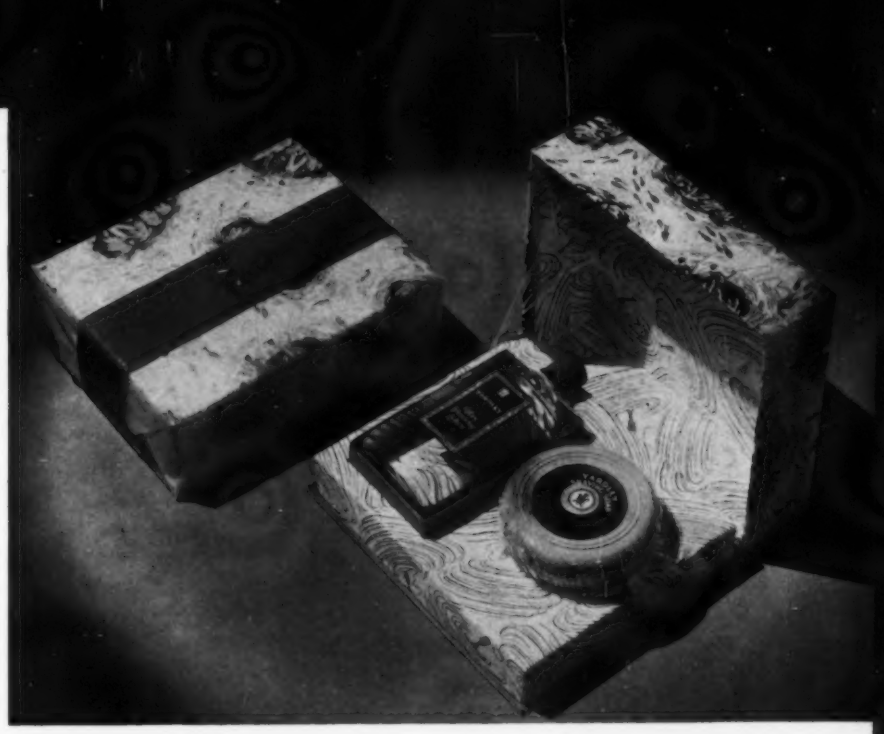
. . .

A. S. Boy'e Co., Jersey City, has recently taken over sale of "Dexta" cleaning powder, which will now be marketed on a national basis. Sold formerly by Dexta Co., its market had been confined almost entirely to New York.

Babs Creations, Inc., New York, has recently put on the market a new line of pine odor toiletries under the brand name "Wood Nymph." The line includes bath oil, foam bath, cologne, cream and sachets in pine odors.

Tesco Chemical Co., Atlanta, has recently standardized on a new type, light weight container for all powdered and flake soap products, as well as powdered and paste detergents. Made from light box-board, the new containers meet all shipping rules.

and Packages



A popular seller in the recent "Father's Day" market was the "Father's Day Set" of Yardley Co., N. Y. Shaving soap and after-shaving lotion, in a half year's supply, were packed to retail at $2.25.

Kolynos Co., New Haven, Conn., maker of "Kolynos" tooth paste, has just introduced a companion product, "Kolynos" tooth powder. Unusually fine texture of powder and pleasing flavor are featured.

Mem, Inc., New York, have just introduced a new member to the Mem line,—"Blue Carnation" soap. Made in several sizes, this new Mem toilet soap is offered in three different packages.

RAW MATERIALS

FOR THE SOAP AND ALLIED INDUSTRIES

ANIMAL OILS, FATS, CHEMICALS, VEGETABLE OILS

DRUMS — TANK CARS — TANK WAGONS

Every raw material necessary for the manufacture of soap and allied products is carried in stock and is available at the right price for immediate delivery to your door.

PALMITIC ACID
90-95% Pure White, High Melting Point

GLISYN
Inquiries solicited on this low price glycerine replacement.

ALCOHOL
AMMONIA
BLEACHING POWDER
BORAX
BICARBONATE OF SODA
CARBON TETRACHLORIDE
CALCIUM CHLORIDE
CAUSTIC SODA
CAUSTIC POTASH
DYES
DISODIUM PHOSPHATE
GLAUBER'S SALTS
GLYCERINE
METASILICATE
OXALIC ACID
POTASSIUM CARBONATE
SAL AMMONIAC
SALT
SAL SODA
SILICATE OF SODA
SODA ASH
TRISODIUM PHOSPHATE

CASTOR OIL
COCOANUT OIL
CORN OIL
COTTONSEED OIL
LARD OIL
NEATSFOOT OIL
OLEIC ACID - RED OIL
OLIVE OIL
OLIVE OIL FOOTS
PALM OIL
PALM KERNEL OIL
PEANUT OIL
RAPESEED OIL
ROSIN
SALAD OIL
SOYA BEAN OIL
SESAME OIL
TEASEED OIL
WHITE OLEINE
FATTY ACID
STEARINE
STEARIC ACID
GREASE
TALLOW

COCOANUT OIL

CAUSTIC POTASH

STEARIC ACID

CAUSTIC SODA

RED OIL

TALLOW

Telephone: MOrsemere 6-4870. Direct New York Tel.: CHickering 4-7533.
Members New York Produce Exchange.

iEi

EASTERN INDUSTRIES, INC.
RIDGEFIELD, N. J.

NEWS

Heinz Co. Testing "Swerl"

H. J. Heinz Co., Pittsburgh, is reported to be conducting a test marketing campaign on "Swerl," a new concentrated laundry soap. Initial tests are being made in Syracuse, N. Y., and Grand Rapids, Mich. Maxon, Inc., Detroit, is handling the campaign.

Wrisley Safety Campaign

Allen B. Wrisley Co., Chicago, is promoting a "Campaign against Carelessness" under the direction of a plant safety committee, whose members include representatives of each department. Each month employees, acting as inspectors, survey the buildings, keeping in mind workers' safety, fire prevention and good housekeeping, and make recommendations to the committee. Suggestions for elimination of hazards are also solicited from the rank and file, and a specialist in the field of accident prevention is attending all meetings.

To Market "Dirt-Flite"

Arromills, Inc., St. Louis, distributors of industrial maintenance materials, are introducing a new soap product under the name "Dirt-Flite." Offered as a hand cleaner and for general household use, it is packed in one-half pound, one pound and two pound containers. It will also be sold in bulk in 25, 50, 100, and 200 pound drums.

Develop Aluminum Cleaner

Claudius Nielsen of Nielco Laboratories, Detroit, has recently developed a new specification on an aluminum cleaner for the war aircraft industry. The new product is said to reduce time in cleaning as well as to increase safety of handling aluminum in alkali cleaners as it cleans without building up an oxide coating.

Wilson WPB Soap Co-chief

E. W. Wilson, assistant general manager of Armour Soap Works, Chicago, has just been named as principal industrial consultant to the Soap and Glycerine Unit of the War Production Board. In announcing confirmation of Mr. Wilson's appointment, George A. Wrisley, chief of the unit, advised that in the future he and Mr. Wilson will serve as co-chiefs, with one or the other constantly on hand. The office of the unit, which is now part of the Fats and Oils Section, Chemicals Branch, Materials Division, WPB, is Room 3532, Railroad Retirement Building, Washington, D. C.

E. W. WILSON

Willard Heads WPB Cosmetics

C. A. Willard, who has been serving as acting chief of the toiletries and cosmetics branch of the War Production Board, has recently been named chief of the branch.

Babbitt Albany Plant

B. T. Babbitt, Inc., New York, is reported to be planning construction of a large new plant at Albany, N. Y.

Export Lend-Lease Soap

Soap has recently been added to the list of lend-lease products being sent to Great Britain, Russia, and other allied nations. The U. S. Dept. of Agriculture recently announced the purchase of approximately 4,000,000 pounds of soap, both toilet and laundry, for lend-lease shipment.

Lever Plant Waste Controversy

The soap factory of Lever Bros. Company at Hammond, Ind., along with other plants in that area, has become involved in a controversy concerned with the killing of fish in Wolf Lake in the southeastern district of Chicago. Sportsmen say the fish are poisoned by trade wastes. L. D. Snow, manager for the Lever Bros. plant at Hammond, has stated that decontaminating apparatus in use at the Lever plant eliminates all harmful ingredients before the wastes enter the open water. The Indiana State health department has been given the problem of determining why the fish still die.

P & G at Nurses Show

Procter & Gamble Co., Cincinnati, occupied a booth at the recent convention of the American Nurses Association and affiliated organizations held in Chicago. The new improved "Ivory" soap was featured and sample cakes were distributed to visiting nurses, while representatives discussed the effect of soap on the skin and the new technique for testing soaps.

Shulton Salesman Dies

James E. Sweeney, a member of the sales staff of Shulton, Inc., died last month at the Seville Hotel, New York. Mr. Sweeney had handled New York City drug accounts for Shulton for the past three years.

REMEMBER?

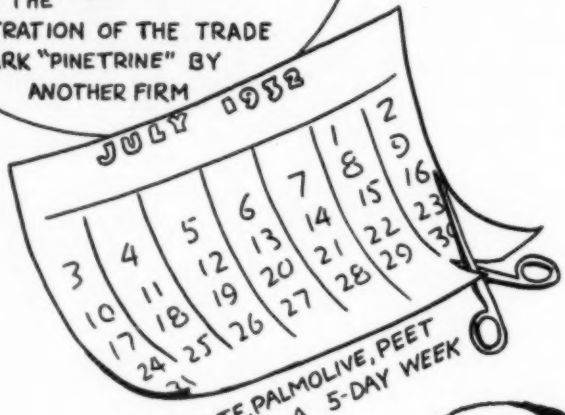
10 YEARS AGO

NATIONAL PUBLICITY FOLLOWED A REWARD OFFER WHEN A POLITICAL OFFICIAL, VISITING IOWA SOAP CO., BURLINGTON, SNEEZED AND BLEW HIS TEETH INTO A SOAP KETTLE

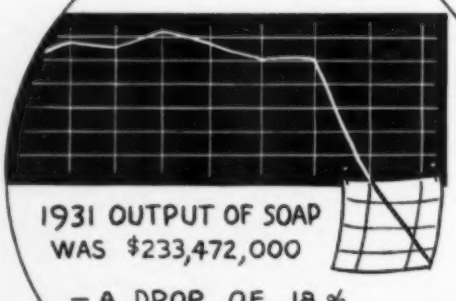
BILLY B. VAN OF PINE TREE PRODUCTS CO. OPPOSED THE REGISTRATION OF THE TRADE MARK "PINETRINE" BY ANOTHER FIRM

FAMOUS CASTILE SOAP CASE- U.S. CIRCUIT COURT OF APPEALS RULED THAT CASTILE SOAP AND OLIVE OIL ARE NOT SYNONOMOUS AS APPLIED TO SOAP—F.T.C. vs. JAS. S. KIRK & CO., AND PROCTOR & GAMBLE, IN COURTS SINCE 1928

DEPRESSION SALES BUILDER— "FAMILY SIZE" CARTONS OF SOAP FLAKES WERE GAINING IN POPULARITY



COLGATE, PALMOLIVE, PEET ADOPTED A 5-DAY WEEK



1931 OUTPUT OF SOAP WAS $233,472,000

— A DROP OF 18% FROM 1929

A VICTORY FOR SOAPERS — BUT — A 5% TAX ON THE PRODUCT WAS TACKED ONTO THE REVENUE BILL WHICH PASSED

SO LONG

Revamp Priority System

A NUMBER of important changes in the priorities system went into effect on July 1. The Production Requirements Plan is now being given greater emphasis and firms using more than $5,000 worth of basic metals in any quarter were required before June 30 to file applications under this plan, this superseding any other form of priority assistance. Every company which in any way requires the assistance of priorities to secure any of the materials it uses has been urged by the WPB to study the PRP plan and Form PD-25A, on which reports must be submitted for operation under PRP. Records should be arranged in such a way, advises the WPB, so that the firm may be able to switch over to operation under PRP on short notice.

Of more immediate importance to soap makers is the proviso that after July 1 explanatory symbols must appear on all orders under the Allocation System. The following Purchaser Symbols are specified:

Purchaser	*Symbol*
The Army	USA
The Navy (includes Maritime (Commisson)	USN
Lend-Lease	LL
Other Foreign Purchasers	FP
Domestic Purchasers	DP

An Allocation Classification Symbol must also appear on each order. A few selected classification symbols are listed below:

Product	*Symbol*
Cleaning and polishing preparations	22.00
Cosmetics, manufacture of	12.20
Drugs and medicines, manufacture of	12.20
Insecticides, fungicides and related chemical products, manufacture of	13.00
Perfumes, cosmetics and other toilet preparations, manufacture of	12.20
Tooth paste, manufacture of	12.20

The symbols are required on all orders after July 1 and also on materials ordered previously if they are for delivery after July 31. For the purposes of the Allocation Classification System, soap means, according to a WPB official, every kind of soap. It also includes glycerin of every grade from spent lye through refined glycerin, when made as a by-product of soap manufacture.

Where the soap manufacturer is purchasing materials in advance of the time that he receives specific orders, he cannot, of course, pass on to his supplier specific Purchaser Symbols representing orders on hand. In that event, he must analyze his sales in the latest available month and apply to his purchase orders or contracts the Purchaser Symbol or Symbols and the percentages represented by sales in that month. For example, if the records for the latest available month show that the soap manufacturer made sales only to domestic purchasers, he would use the symbol DP without percentage figures, but if his analysis for that month shows that 85% of his sales were to domestic purchasers, 10% to the Army, and 5% to the Navy, then he should use the Purchaser Symbols as follows:

85%—DP —12:20
10%—USA—12:20
5%—USN—12:20

A soap manufacturer who makes other products in addition to soap which do not fall within the 12.20 Allocation Classification, must place on each purchase order or contract for materials, supplies, etc., that will be used in two or more classifications, the symbol of each classification to the extent that he can trace the particular purchase to its proper classification under his methods of bookkeeping or inventory control. Where this is not practicable, the manufacturer places on his purchase orders the percentage division between his sales for the latest available month. For example, a manufacturer engaged 40 per cent in making soap, 50 per cent in making insecticides, fungicides, and related chemical products, and 10 per cent in making cleaning and polishing preparations, and unable to segregate a particular purchase to one of these classifications would place on his purchase order:

13.00—50%
12.20—40%
22.00—10%

—— ♦ ——

Soap Labor Costs Rise

Average weekly earnings in the soap industry were reported as $35.18 for April, 1942, by the U. S. Department of Labor. This represents an increase of one-half of one per cent from the average for March, 1942, and 18.2% from April, 1941. Average hours worked per week were reported as 40.9 for April, 1942, a drop of half of one per cent from March, and an increase of 1.2% from April, 1941. Average hourly earnings were 86.1c for April, 1942, an increase of 1.1% from March, 1942, and an increase of 16.8% from April, 1941.

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Fat Salvage Campaign Begins

First advertising copy in the campaign sponsored by the soap and glycerin industry to stimulate saving of waste kitchen fats was released in the Chicago district late in June, and was scheduled to appear very shortly in two hundred other important areas. The copy tells why fats should be saved, how they should be saved and where to take the salvaged fats. The campaign features the slogan "Save Waste Fats to Make Explosives" and uses as a symbol a frying pan from which fat is shown pouring into the breach of a gun in action. Chicago was chosen as the initial city to get the new campaign since it was the original Chicago campaign which led the way to the nation-wide effort now beginning.

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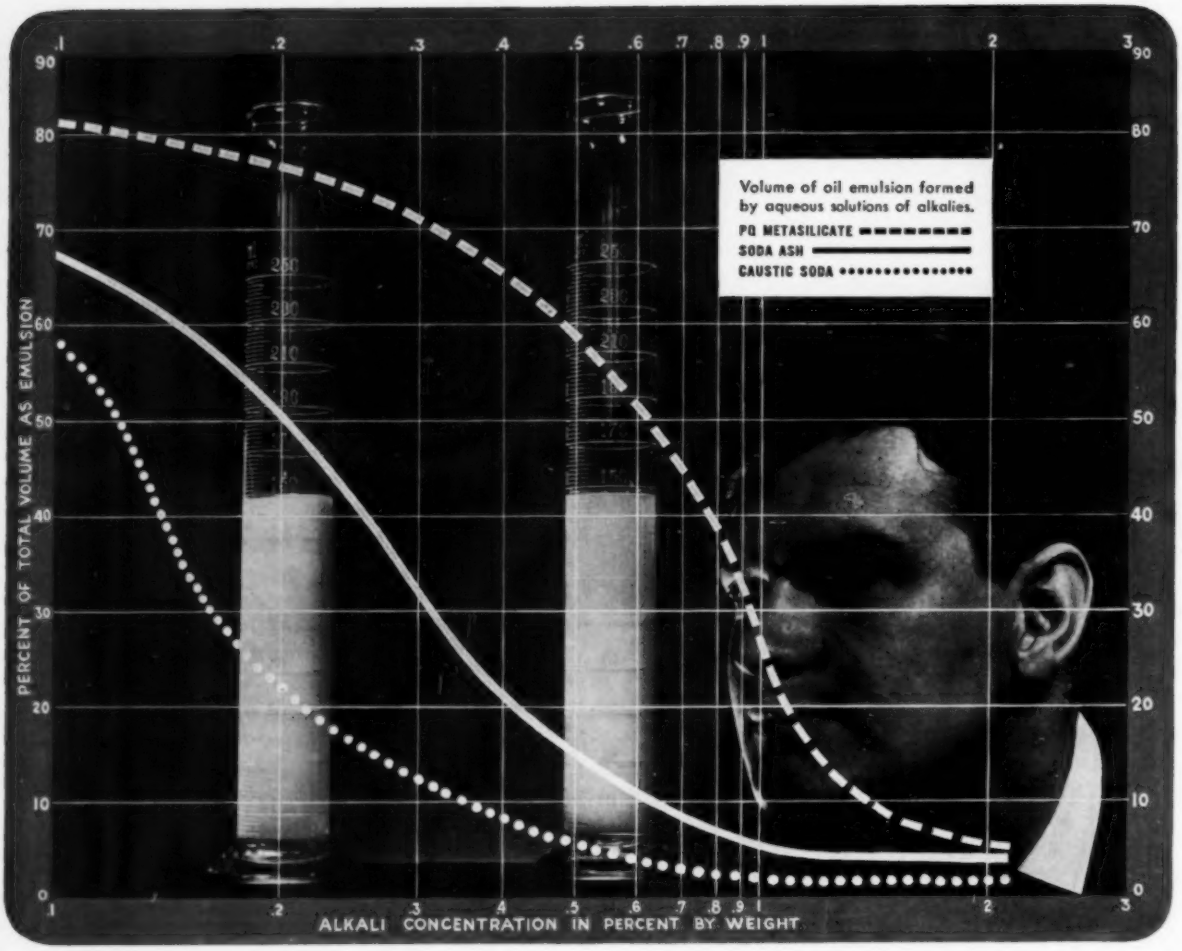
Newton Heads Food Technologists

Dr. R. C. Newton, vice president in charge of research for Swift & Co., Chicago, was elected president of the Institute of Food Technologists at their Minneapolis convention last month.


Volume of oil emulsion formed by aqueous solutions of alkalies.
PQ METASILICATE
SODA ASH
CAUSTIC SODA
PERCENT OF TOTAL VOLUME AS EMULSION
ALKALI CONCENTRATION IN PERCENT BY WEIGHT

How SiO_2 Aids Cleaning

PQ Silicates—Quick Emulsifiers

Soaps, whether they be basically stearate or oleate, and PQ Silicates are inseparable partners. Just one of the several reasons why PQ Silicates are preferred ingredients—the oily films are more quickly broken up and distributed in the cleaning solution.

A comparison with common alkalies repeatedly has shown the superior performance of PQ Silicates; the distinguishing component, soluble silica, has a fundamental effect in hastening emulsification. See chart above.

In this demonstration, solutions were made containing from 0.1 to 2 percent of NaOH, $Na_2SiO_3 \cdot 5H_2O$ and Na_2CO_3. 75 cc. of each solution was stirred with 75 cc. of light motor oil for 5 minutes at 20° C. The mixture was poured into a bottle and the depth of the oil emulsion and the aqueous layers measured after 24 hours.

The other valuable properties of PQ Silicates are described in our Detergency Series of bulletins, mailed to you on request.

PHILADELPHIA QUARTZ CO.

SILICATES OF SODA

125 S. THIRD STREET, PHILA., PA.

Siddall P & G Comptroller

Kelly Y. Siddall, former chief accountant, has been elected comptroller of the Procter & Gamble Co.,

K. Y. SIDDALL

Cincinnati, to fill the vacancy caused by the death of William R. Huber. Mr. Siddall, a graduate of the College of Engineering of the University of Cincinnati, joined the company in 1926 as an accountant in the cost department. He is secretary of the Cincinnati Chapter of the Comptrollers Institute, and for several years has taught cost accounting in the evening courses at the University of Cincinnati. Mr. Siddall, 41 years old, is married and lives in Wyoming.

P & G Vice-President Dies

Herbert Greer French, vice-president of Procter & Gamble Co., Cincinnati, died on June 25 from a heart attack at his home in Amberley Village.

For many years he was one of Cincinnati's leading business men and patron of the fine arts. The offices of the company were closed at noon, following news of his death, and the factory at Ivorydale was closed on June 26-27.

Mr. French was born in Covington, Ky., in 1872. His father was a member of Sibley, French & Co., pioneer commission merchants of Cincinnati, who later became treasurer of the Procter & Gamble Co. His son graduated from Cincinnati University, and became associated with P. & G. soon afterward, serving continuously with the company until his death. He succeeded his father as treasurer and director upon the former's death in 1903, and later became vice-president. He also was a director of the Cincinnati, New Orleans & Texas Pacific Railway Co. Mr. French was unmarried.

Cut Soap Can Tin Coating

Restrictions have just been ordered by the WPB on tin cans for packaging of liquid soaps. Manufacturers of such containers have been ordered to use electrolytic tin plate as far as possible, with tin coating not to exceed 0.50 pound per base box, for ends of cans with soldered side seam and for ends and bodies of other cans. Packers must accept such cans up to 50% of the delivery. Cans manufactured, or in process of manufacture, as of June 13, the effective date of the order, are exempted from its provisions.

Tesco Absorbs Sudite

Tesco Chemical Co., Atlanta, soap manufacturer, has just taken over Sudite Chemical Mfg. Co., also of Atlanta, manufacturer of cold water soaps, cleaning compounds and automotive specialties. Operation of the Sudite plant will be continued temporarily. As soon as work is completed on a new extension to the Tesco plant, the acquired equipment and machinery will be transferred there and all operations consolidated at the home plant.

Bond Award To C-P-P

A record of more than 90 per cent employee participation in the payroll deduction War Bond purchase plan won an award of a Treasury Department certificate for Colgate-Palmolive-Peet Co. last month, the presentation being made by A. Harry Moore to E. H. Little before over a thousand employees and guests of the company at the Jersey City offices, June 24. H. F. Elberfeld, company vice-president, who is executive chairman of the Jersey City War Bond Committee, presided. The announcement was made that similar presentations will be made at the Jeffersonville, Ind., and Kansas City plants which have also exceeded 90 per cent participation in the plan.

TGA Re-elects Herman Brooks

Herman L. Brooks, president and general manager of Coty, Inc., was re-elected president of the Toilet Goods

H. L. BROOKS

Association at the annual meeting at the Waldorf-Astoria Hotel, New York, June 16 and 17, along with the entire group of other officers and directors. Problems of supply and production under war-time conditions and the particular complications imposed by price control of cosmetics and the raw materials from which they are made came in for particular attention. Among the decisions reached was one of approval for continuation of the association's exchange bureau. The association also approved the formation of an export committee.

The only new members of the official family for the coming year are Davis Factor of Max Factor & Co., and J. M. Jaffin of Vadsco Sales Corp., new members of the executive board. Other officers re-elected for another term include: first vice-president, Cecil Smith, of Yardley & Co.; second vice-president, P. E. Hulburt, of the J. B. Williams Co.; third vice-president, H. P. Willats, of Colonial Dames, Inc.; treasurer, Paul F. Vallee, of Roger & Gallet; secretary, J. I. Poses, of A. A. Van Tine Products Corp.; and executive secretary, Stephen L. Mayham.

Davis on Business Bureau

Floyd S. Davis, secretary of Lever Brothers Co., was recently named a member of the board of directors of the Boston Better Business Bureau.

U.S.I. ALCOHOL NEWS

July ★ A Monthly Review of Technical Developments for Chemists and Executives ★ 1942

Fungus Infections Quickly Relieved By Alcohol Lotion

Treatment Called Efficacious for Finger and Toe Infections

A lotion consisting of alcohol, salicylic acid, and glycerine has been found highly efficacious in treating fungus *tricophyton inguinale* infections, according to recent reports by a British authority. The lotion is described as having the following proportions:

Salicylic acid	1.3 gm.
Alcohol	32.0 c.c.
Glycerine	4.0 c.c.

Infections of this type frequently occur on or between fingers and toes, are characterized by extremely irritating minute blisters, and do not usually respond to treatment by ordinary lotions. Application of the alcohol-salicylic acid lotion twice a day, however, is reported to give quick relief from itching.

Alcohol in Wet Dressings

In another field of medical treatment, a use for alcohol is suggested in the treatment of hand injuries. It is reported that satisfactory results can be attained with a mixture of equal parts of alcohol and glycerine to replace other types of wet dressings.

Powerful New Germicide Extracted from Ground

PHILADELPHIA, Pa. — A high degree of germicidal efficacy is reported for a new agent — H-1 — extracted from germs that live in the ground. Resembling gramicidin in its origin and properties, H-1 is expected to be particularly useful in the treatment of war wounds. It is said to be particularly effective against infection with germs in the gram-positive group, found in the majority of wounds.

H-1 appears highly efficacious in very dilute solutions. It is prepared for use by first dissolving it in alcohol and then diluting the solution with water.

Drug Replaces Atropine

CHICAGO, Ill. — A new synthetic drug, made from materials readily available in this country, has been developed as a substitute for atropine. The drug is expected to be placed on the market in the near future.

Supplies of atropine are now limited because of the scarcity of belladonna, from which atropine is derived, and the new drug will be helpful in relieving the shortage. Unlike atropine, the drug does not dilate the eye pupils, it is claimed.

W. O. Griffen Named General Production Manager of U.S.I.

Mr. W. O. Griffen, formerly Superintendent of the Curtis Bay Plant of U.S.I., has been appointed General Production Manager. He will make his headquarters at the company's Executive Offices in New York, and will assume the duties previously performed by the late A. A. Backus.

W. O. Griffen

Mr. Griffen has been associated with the U.S.I. organization since 1917.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

A drop-dispenser closure made entirely of glass is now on the market. Closure is described as consisting of a glass tube inserted tightly into the neck of a bottle. Opening of the tube on the outside of the bottle is of smaller diameter than the opening inside. When bottle is turned upside down, only one drop of liquid flows out at a time, it is claimed. **(No. 590a)**

A soap process recently patented depends on the reaction between a glyceride and an alcohol as the first step. It is reported that with this process glycerine can be recovered in very pure and highly concentrated form. **(No. 591a)**

Industrial gloves are made of fabric treated with synthetic rubber to form an exterior coating that is said to be flexible, liquid-proof, and not subject to snagging. According to the maker, the synthetic rubber is resistant to attack by oils, solvents, acids, alkalis, and abrasion. **(No. 592a)**

A new fluorophotometer is described as a complete self-contained model, especially designed to accelerate routine control work in the determination of vitamins and minerals. It eliminates the amplifier and stabilizer incorporated in other models, and uses a simple electrical circuit. **(No. 593a)**

Revised Alcohol Regulations No. 3 Are Now in Effect

Regulations No. 3 Revised, as filed with the Federal Register March 6, became effective June 4.

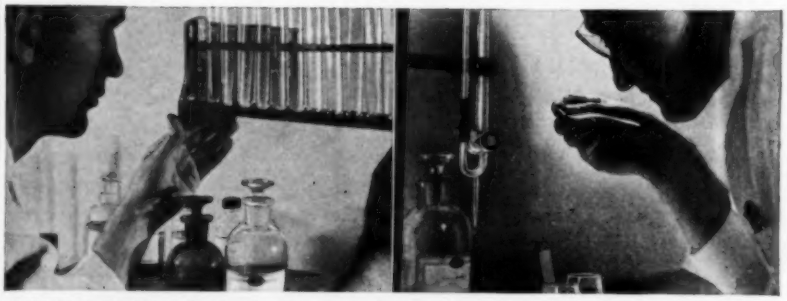
These regulations supersede Regulations No. 2, approved March 24, 1931, Regulations No. 3, approved March 24, 1931, Regulations No. 29, revised August 18, 1914, Regulations No. 30, revised October 12, 1917, and Gauging Manual, approved November 21, 1938, and cover the manufacture, denaturation, disposition, transportation and use of alcohol, denatured alcohol, and articles (including the sale by bonded dealers and the use by manufacturers of denatured rum).

New Cosmetic for Teeth Attains Popular Approval

Preliminary tests of consumer reaction indicate a high measure of popularity for a novel cosmetic for the teeth, it is reported. The cosmetic, which is covered by basic patents, is described as a safe, moisture-proof, temporary covering of a lacquer type. It is applied with a brush to cover stains or blemishes, and is said to be resistant to mouth and food acids and alkalis.

According to the manufacturer, the product was carefully studied by dental authorities and practicing dentists before it was placed on the market, and results indicated that it could be safely used.

In addition to its use as a cosmetic, the new product is said to have found applications in dentistry also, as a lining for cavities, a liquid bandage for gum wounds, a covering for exposed dentine, and a protective coating on new porcelain inlays.



U.S.I. Pure Alcohol, which has found many applications for medical and scientific purposes, is subjected to rigid tests to assure conformity with U.S.P. specifications. (Left) Absence of blue or violet color after addition of test solutions indicates freedom from methanol. (Right) Odor tests are used to determine freedom from fusel oil constituents.

U.S.I. INDUSTRIAL CHEMICALS, INC.
60 EAST 42ND STREET, NEW YORK
CHEMICALS · SOLVENTS · ALCOHOLS · ANTI-FREEZE · INDUSTRIAL · USI · SERVICE TO INDUSTRY
BRANCHES IN ALL PRINCIPAL CITIES

Charge Industrial Espionage

Procter & Gamble Co. and several P & G employees have been charged in a Federal indictment with use of the mails to defraud in a campaign of industrial espionage against Lever Bros. Co. Following a six months' investigation, a Federal Grand Jury handed down an indictment June 8, charging that the defendants obtained information, samples of soap products, formulas and production figures from Lever Bros. Co. in Cambridge.

The indictment named the Procter & Gamble Co., the Procter & Gamble Distributing Co., and the Procter & Gamble Manufacturing Co., and these Cincinnati men, identified as employes of the companies: D. Paul Smelser, Raymond J. Lamping, and Cleo W. Knappenberger.

Also indicted were Thomas M. Mulvaney, of Cincinnati; Ralph E. Cote, of Somerville; Michael F. Toner, of Cambridge; Frank J. Elms, of Boston; Harold R. Gunn, and Edward J. Johnson, both of Cambridge, all identified as former employes of the Lever Bros. Co. The indictment also charged Anthony Mersicano, of Boston, with receiving the samples and information from the others, and sending them to Cincinnati.

The indictment charges further that Frank J. Elms, of Boston, a former employee of the Lever Brothers Co., and one of the individuals indicted, had received approximately $2,700 from a Procter & Gamble concern and that some of this money was parcelled out among other former employes of Lever Brothers.

Procter & Gamble Co. made a prompt general denial of the charges, stating that "neither the company nor any of its subsidiaries ever engaged in any of the practices alleged against them."

Chicago Fat Collection Success

Chicago's campaign for collection of kitchen fats and greases has, since its inception, brought in over 75,000 pounds weekly, according to representatives of the Office of Civilian Defense in that city. The figure was made public at a rally of housewives in the city council chambers at which plans were laid for intensifying the collection campaign, through block by block solicitation by conservation wardens. The latter were also asked to discourage the making of home-made soap. Chain stores and restaurants in Chicago, which formerly made soap from their waste greases, were said to have discontinued this practice and are turning their greases over to the war effort.

Urge Cosmetic Substitutes

The Toiletries and Cosmetics Branch of the War Production Board warned manufacturers of these products, in a bulletin issued June 11, that it will be necessary for them to turn to substitutes for a number of chemical raw materials which are in short supply. It was pointed out that mannitol, sorbitol and other derivatives are available only for orders bearing high priority ratings. The bulletin also emphasizes that a tight supply situation exists on wetting agents and emulsifiers, such as sulphonated coconut oil and lauryl alcohol.

Boston Bims To Golf

The Bims of Boston will hold their first golf tournament and dinner party of the 1942 season at Commonwealth Country Club, Newton, Mass., Thursday, July 9. Robert C. Kelly, chairman of the organization, is in charge of arrangements.

Bond Award To Lueders

George Lueders & Co., New York, essential oils, has just been advised by the U. S. Treasury Department that it is the first essential oil house reporting purchase of war bonds on the payroll deduction plan by over ninety per cent of company employees. A certificate detailing this record has been received from Henry Morgenthau, Secretary of the Treasury.

Porter Blairsville Plant

H. K. Porter Co., Pittsburgh, has announced plans for construction of a new plant at Blairsville, Pa. The company manufactures a complete line of chemical processing equipment. When completed, the plant will employ between 150 and 200 men.

Trade Soap for Grease

Berry-Zink Soap Corp., Louisville, Ky., is currently publicizing a program of exchange of soaps for waste kitchen fats. The company offers the householder one-half pound of "Berry-Zink" household soap free for every pound of kitchen grease, or will buy the grease outright. In a series of folders and letters being mailed, the householder is urged to shun home soap making as an unpatriotic move resulting in waste of glycerin, and use is made of statements of the OPA and WPB discouraging home soap manufacture. The company furnishes sanitary containers in which kitchen greases can be collected.

This move is particularly interesting in the light of a recent suggestion addressed to George A. Wrisley of the Soap and Glycerin Division of WPB by Emil Bronner, soap consultant, advocating general adoption of such a program. Mr. Bronner reports that on a recent trip through New England he talked with a number of farmers who slaughter their own stock and who advised that soap makers formerly used to call once a week, exchanging soap for grease, but discontinued this practice some years back. Mr. Bronner suggests that country folks having infrequent contact with butcher shops be assisted in organizing fat and grease collection units, as a move to discourage home soap manufacture on the farm and to aid in the recovery of every available pound of glycerin.

House Okays Coconut Tax Cut

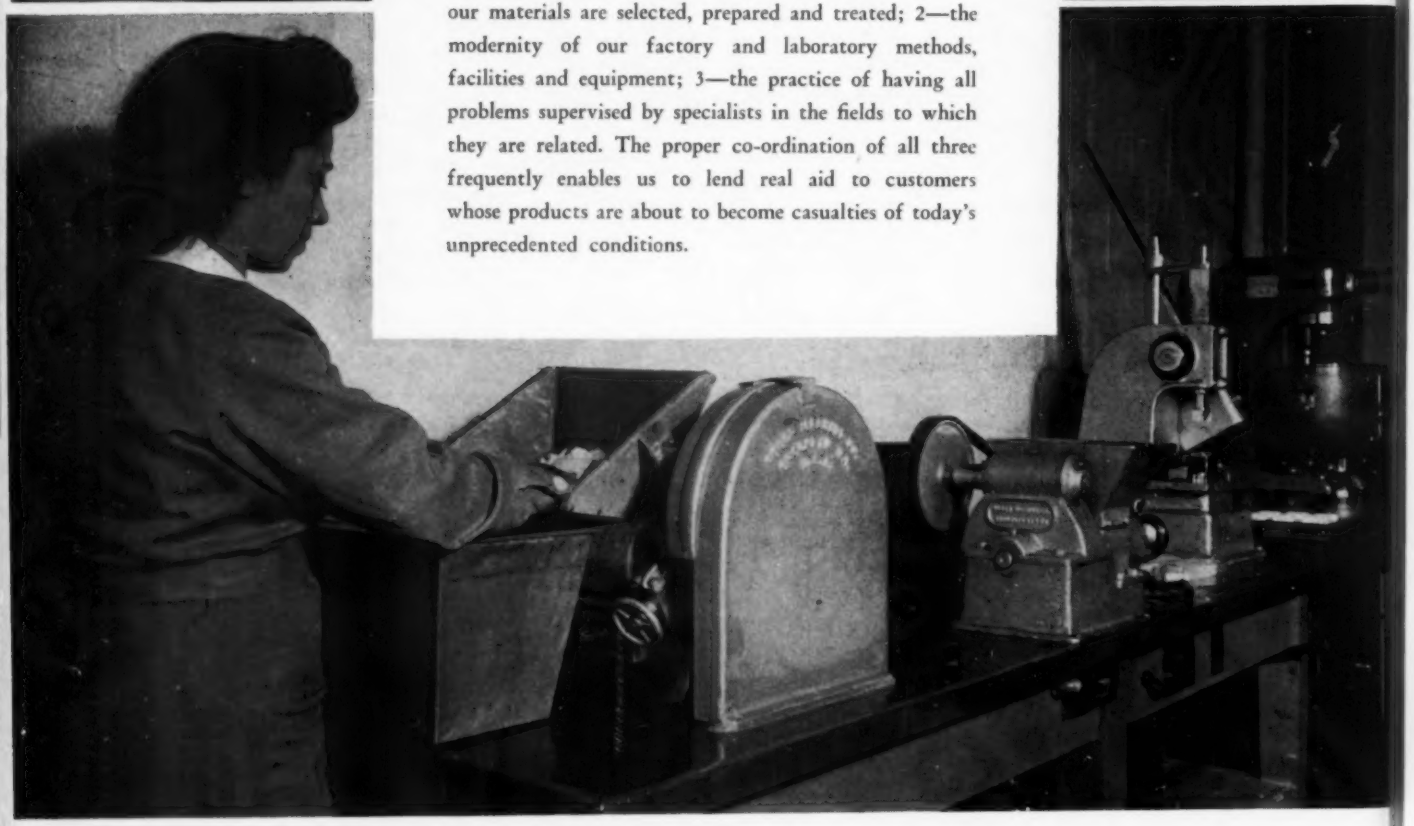
The House of Representatives passed a new bill (H.R. 6682) last month, suspending for the duration of the war the added penalty of 2c per pound processing tax on coconut oil of non-Philippine origin. The affirmative vote was 184 to 74. The measure is now before the Senate.

Distribute MacArthur Photograph

Chemical Manufacturing & Distributing Co., Easton, Pa., is distributing a colored print of a photograph of General Douglas MacArthur. Copies are available on request.

BACKGROUND VALUES . . . a PART of the product, APART from the price

TODAY, every manufacturer and every supplier is faced with the major problem of reduced rations, not only of essential raw materials, but of replacement materials as well. All are in the same disturbing fix. There would be nothing new or novel, therefore, in our offer to help you make the best use of *available materials* were not the sincerity of that suggestion based upon a *combination* of advantages which our firm is fortunate to possess. Summed up, these advantages cover three aspects of our business: 1—the exacting care with which all of our materials are selected, prepared and treated; 2—the modernity of our factory and laboratory methods, facilities and equipment; 3—the practice of having all problems supervised by specialists in the fields to which they are related. The proper co-ordination of all three frequently enables us to lend real aid to customers whose products are about to become casualties of today's unprecedented conditions.



Photos: Upper left—Centrifuging is only one of the precautions taken by us to insure absolute purity and cleanliness of product. Upper right—Each of our laboratories is under the direct supervision of a specialist with long practical experience in his particular field. Bottom—Modern laboratory equipment—in this case, all the essentials of a miniature soap plant—is available to facilitate the work of our staff technicians and chemists.

FRITZSCHE BROTHERS, Inc.

PORT AUTHORITY COMMERCE BLDG., 76 NINTH AVENUE, NEW YORK, N. Y.

BRANCH STOCKS

BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.

FACTORIES AT CLIFTON, N. J. AND SEILLANS (VAR) FRANCE

Headquarters for
ESSENTIAL OILS • FLAVORS
• AROMATIC CHEMICALS •
PERFUME RAW MATERIALS

Await Soap Fat Limitations

RESTRICTIONS on the amounts of fats and oils which the soap industry, and the individual soap maker as well, will be permitted to use, are expected to be announced very shortly by the War Production Board. As this issue was being prepared for press, opinion in the trade indicated that such restrictions might be announced to go into effect early in July, with the soap industry to be allotted a total of perhaps 1,750,000,000 lbs. of primary fats, plus an undetermined poundage of foots. This would represent a substantial decline from the estimates of 1941 consumption which is thought to have been in the neighborhood of 2,332,000,000 lbs. The allowed consumption for the year July 1, 1942, to June 30, 1943, would, however, be approximately 90 per cent of the average for the two calendar years, 1940 and 1941.

It is expected that if and when such a plan of fat control is adopted its administration would probably be on a quarterly basis, with each soap maker being permitted to use in any one quarter not more than 90 per cent of one quarter of his own consumption of all fats and oils in the two calendar years 1940 and 1941. It is expected that his choice of what raw materials to use would not be controlled, but merely his total use of all fats and oils during the quarterly period.

Under such a plan, use allowances would be subject to quarterly adjustment, and it is thought that a soap maker failing to use his quota in one quarter might be allowed to use up the balance in a subsequent quarter. Orders for soap for lend-lease shipment would permit receipt of additional quantities of oils and fats specifically earmarked for such orders. Consumption of fats and oils by the soap industry over the most recent four-year period is summarized in the accompanying table.

◆

Protests Tube Restrictions

A protest against Conservation Order M-115, requiring the retailer to get an empty tube in exchange for each new tube of dental or shaving cream he sells, is contained in a recent letter from C. B. Brush of Trade Laboratories, Newark, N. J. Mr. Brush claims that the restrictive order has merely served to impede sales without creating any additional tin salvage possibilities. He asks that the restrictions be set aside, at least temporarily, so that specially branded tubes, now practically unsalable because of the restrictions, can be disposed of.

◆

Affirm "Health Soap" Award

A judgment in favor of Lever Bros. Co. in its action against J. Eavenson & Sons, Inc., Camden, N. J., in the celebrated "health soap" case has recently been unanimously affirmed by the New York Court of Appeals. The judgment, which totaled $72,285.35, included profits realized by Eavenson from the sale of soaps judged by the court to be illegal imitations of Lever's "Lifebuoy," court costs, attorney fees and expenses. The affirmation of this judgment marks the end of protracted litigation which started in March, 1934. In the original court decision there was, in addition to the damage award, a restraining order by the court against further manufacture and sale by Eavenson of red, carbolic "health" soaps, regardless of shape, and of use of the designation "health soap" on soaps having a cresylic or similar odor, which in appearance and design are calculated to deceive the purchasing public.

◆

C-P-P- Buys Jersey Plant

Colgate - Palmolive - Peet Co., Jersey City, has just bought the refining plant and warehouse of American Sugar Refining Co., consisting of six buildings, located at Essex and Washington Streets, Jersey City.

◆

Lever Offers Mending Kit

Lever Bros. Co., Cambridge, Mass., are using national magazine space to offer a "purse size" mending kit to purchasers of "Swan," "Lifebuoy" or "Rinso" soap. The kit, including a thimble, glove mending finger, five spools of thread, needle and pins, is available for 15 cents plus wrapper or box top from any of the three products named. For an additional five cents the purchaser's initials will be placed on the kit. A free soap coupon worth ten cents is added to encourage repeat sales.

◆

Cordero Lueders Director

Frank M. Cordero, head of the accounting department of George Lueders & Co., essential oils, New York, was elected director and assistant treasurer of the company at a recent meeting of the directors. Mr. Cordero has been associated with George Lueders & Co. for over fourteen years.

◆

Pochat Heads Cincinnati P.A.s

Louis G. Pochat, Jr., assistant purchasing agent, Procter & Gamble Co., has been elected president of the Cincinnati Association of Purchasing Agents.

Soap's Consumption of Fats, in Thousands of Pounds
(000 pounds omitted)

	1938	1939	1940	*Preliminary* 1941
Tallow, inedible	702,267	785,401	786,456	1,057,303
Grease	96,356	120,856	256,886	310,487
Coconut oil	342,982	388,912	396,857	484,124
Palm oil	91,642	102,146	84,934	129,871
All other	235,288	256,749	197,501	162,071
	1,468,535	1,653,704	1,722,634	2,143,857
Foots	235,562	177,221	147,072	188,651
	1,704,097	1,830,925	1,869,706	2,332,508

Good News FROM AUSTRALIA!

FIGHTING and bombing planes in constantly increasing numbers are arriving at American bases "Down Under." And products of James Good, Inc., of Philadelphia, Pa., in constantly increasing quantities are being supplied to keep them fighting!

"Good" Castor Oil for aircraft engine lubrication, "Good" Petrolatum for light lubrication and rust prevention, and "Good" Carbon Tetrachloride for fire extinguishers . . . are all being shipped in Crown Containers made to meet Army, Navy and Marine Corps specifications.

Many manufacturers in addition to James Good, Inc., have been gratified to learn that Crown containers meet rigid Government specifications without alteration.

CROWN CAN COMPANY, PHILADELPHIA, PA., *Division of Crown Cork and Seal Company.* Baltimore • St. Louis • Houston • Madison • Orlando • Fort Wayne • New York • Nebraska City

INDEPENDENT AND HELPFUL CROWN CAN

CONTRACTS AWARDED

Treasury Soap Awards

In a recent opening by the Treasury Procurement Department, Washington, D. C., the following contracts were awarded: Stevens-Wiley Manufacturing Co., Philadelphia, 18,720 lbs. of scouring compound powder at 2.85c a lb.; Colgate-Palmolive-Peet Co., Jersey City, 180,000 lbs. of laundry soap at 5.65c a lb.; S. & S. Soap Co., Brooklyn, 18,750 lbs. of grit soap at 4.4c a lb.; Colgate-Palmolive-Peet Co., Jersey City, 22,500 lbs. of grit soap, at 12.4c a lb.; J. R. Watkins Co., Winona, Minn., 1,800 lbs. of shaving soap at 21c a lb., and J. A. Tumbler Laboratories, Baltimore, 1,000 lbs. of cleaning compound at 18.25c a lb.

Treasury Procurement Bids

In a recent opening by the Treasury Procurement Department, Washington, D. C., the following low bids for miscellaneous supplies were submitted: Actofoil Co., Media, Pa., 100,000 lbs. of paste soap at 3.8c; J. A. Tumbler Laboratories, Baltimore, 1,000 containers of cleaning compound at 17.9c; and Alco Oil & Chemical Co., Philadelphia, 1,000 gals. floor wax at 52c.

Insecticide Bid

J. A. Tumbler Laboratories, Baltimore, submitted the low bid on 8 drums of insecticide at 71c a gal. in a recent opening by the District Government, Washington, D. C.

Post Office Cleaner

Varcraft Works, Pottstown, Pa., submitted the low bid on 3,000 gals. of cleaner and renovator at 62c, in a recent opening by the Post Office Department, Washington, D. C.

Insecticide Bid

In a recent opening by the Treasury Procurement Department, Washington, D. C., the D. A. Collins Manufacturing Co., Brooklyn, submitted the low bid on 110 gals. of insecticide at 51c a gal.

Navy Disinfectant Bids

The following low bids were submitted in a recent opening by the Navy Purchasing Office, New York: Baird & McGuire, Holbrook, Mass., 3,000 gals. of disinfectant at 52c a gal.; Potomac Chemical Co., Washington, D. C., 300 gal. polar-type, thin film, rust-preventive compound at 91c a gal. and 1,500 gals. of rust-preventive compound at $1.22 a gal.

Marine Corp TSP Award

Stevens-Wiley Manufacturing Co., Philadelphia, submitted the low bid on 5,00 lbs. of technical trisodium phosphate at 9c, in a recent opening by the Marine Corp, Washington, D. C. In the same opening, Colgate-Palmolive-Peet Co., Jersey City, was awarded a contract for 16,800 lbs. of chip soap at 10.32c a lb.

Post Office Awards

The following contracts were awarded in a recent opening by the Post Office Department, Washington, D. C.: Sherwin-Williams Co., Washington, D. C., 3,000 gals. of floor wax at 71c a gal. and 14,000 gals. of floor wax at 51c a gal; Washine National Sands, Long Island City, N. Y., 40 lbs. of trisodium phosphate at 3.14c, and General Soap Co., Chicago, 1,246 bbls. soap scouring compound at 2.25c a lb., 617 bbls. of soap scouring compound at 2.75c a lb., and 171 bbls. of soap scouring compound at 3c a lb.

Treasury Soap Bids

In a recent opening by the Treasury Procurement Department, Washington, D. C., the following low bids were submitted: U. S. Soap Manufacturing Co., Media, Pa., 17,500 lbs. of toilet soap at 12.9c; Imperial Products Co., Philadelphia, 2,553 lbs. of scouring compound at 2.5c a lb.; Stevens Soap Co., Brooklyn, 150,000 lbs. powdered laundry soap at 2.83c, and Colgate-Palmolive-Peet Co., Jersey City, N. J., 17,500 lbs. of powdered toilet soap at 12.27c a lb.

Govt. Seeks Warehouse Space

Soap and chemical manufacturers, along with other industrial organizations are being offered an opportunity to obtain revenue from vacant or idle plant and warehouse space by leasing it for storage of the vast amounts of war materials and other supplies now being turned out for the Federal government. Under the sponsorship of the Office of Defense Transportation, Federal Emergency Warehouse Associations are being set up in 40 key cities. With storage space in regular warehousing channels practically exhausted in many strategic centers, the Emergency Associations are appealing to manufacturers to list with them such available space as might be converted to storage purposes. It is suggested that soap or chemical manufacturers who see opportunity to cooperate in conversion of their plants to this war use, should consult local warehousemen who can tell them just how to proceed.

O.P.A. Advice Offered

The regional office of the Office of Price Administration in the Union Commerce Building, Cleveland, has in a communication signed by Sidney H. Mitchell, Jr., Price Specialist, Chemical and Drug Branch, O.P.A., offered to give full assistance to all manufacturers and others who may have problems under the price ceiling law if they will get in touch with that office of the O.P.A. The Cleveland regional office covers the states of Michigan, West Virginia, Kentucky, Indiana, and Ohio.

Indict Acid Manufacturers

The U. S. Department of Justice announced June 26 that a group of 21 chemical companies had been indicted for alleged anti-trust law violations in the sale of acids important in the war effort.

SCHIMMEL
for SYNTHETICS

. . . in place of
Oil Citronella

we suggest

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CITRONELLA
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WITH supplies of natural oils of citronella cut off, these two SCHIMMEL synthetic substitutes are especially recommended for effective perfuming of household and floating soaps, fly sprays, insecticides and in other products where citronella is customarily used.

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Chicago
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SCHIMMEL & CO., Inc.
601 West 26th St. New York, N. Y.

TRADE MARKS

The following trade-marks were published in the June issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

PIONITE—This in form of stencil describing powder cleanser or detergent. Filed Jan. 10, 1941, by Pioneer Salt Co., Philadelphia. Claims use since July 31, 1941.

KELITE—This is shaded outlined letters above a representation of a key drawn over a glowing sun, describing powder, paste, and fluid cleaners, and soap. Filed by Kelite Products, Inc., Los Angeles, Mar. 17, 1942. Claims use since Feb. 10, 1937.

M.M—This in solid letters describing dental plate cleanser. Filed by J. A. Maxwell, Drew, Miss., Mar. 20, 1942. Claims use since Feb. 26, 1942.

SANI-SOFT—This in solid letters describing chemical water softener. Filed by Hill-Luthy Co., Peoria, Ill., Mar. 24, 1941. Claims use since Feb. 26, 1941.

PREMIER—This in solid letters describing borax. Filed by Francis H. Leggett & Co., New York, Jan. 16, 1942. Claims use since Jan. 1, 1905.

RELBE—This in solid letters describing athlete's foot powder. Filed by Relbe Co., Miami, Fla., Mar. 27, 1942. Claims use since July 15, 1937.

RED BALL—This in semi-circular solid letters describing glass cleaner. Filed by Louis Edwards, Denver, Jan. 22, 1942. Claims use since Aug. 5, 1940.

BFG—This in reverse letters within a fanciful emblem over the numerals 1870, describing polishes and glass cleaners. Filed by B. F. Goodrich Co., New York, Mar. 6, 1942. Claims use since July, 1941.

POTPOURRI—This in script lettering describing soap. Filed by Prince Matchabelli Inc., New York, Apr. 3, 1942. Claims use since Jan. 9, 1941.

K K JR—This in solid letters describing soap, soap flakes and chips, and cleaning preparation. Filed by Fitzpatrick Bros., Chicago, Dec. 9, 1939. Claims use since Nov. 10, 1939.

VINTAGE—This in solid letters describing soap. Filed by Mulrey Lloyd & Co., New York, April 6, 1942. Claims use since Nov. 7, 1941.

JALMA—This in solid letters describing washing and cleaning preparation. Filed by Special Formula Corp., Bloomfield, N. J., Mar. 17, 1942. Claims use since Noc. 15, 1933.

GREASORBA—This in solid letters describing sweeping compound. Filed by Zellerbach Paper Co., San Francisco, Apr. 6, 1942. Claims use since Feb. 2, 1942.

NACO-KOP — This in outline letters describing insecticide dust. Filed by Naco Fertilizer Co., New York, Mar. 30, 1942. Claims use since Oct. 8, 1941.

NACO-SUL — This in outline letters describing insecticide dust. Filed by Naco Fertilizer Co., New York, Mar. 30, 1942. Claims use since Oct. 8, 1941.

LANCE FORMULA—This in solid letters describing dentrifice. Filed by Ecnal Laboratories, Pasadena, Calif., Apr. 10, 1942. Claims use since Feb. 20, 1942.

KESS—This in script lettering describing shampoo. Filed by McKesson & Robbins, Inc., New York, Apr. 24, 1942. Claims use since Jan. 1, 1942.

KESSO—This in script lettering describing shampoo. Filed by McKesson & Robbins, Inc., New York, Apr. 24, 1942. Claims use since Apr. 15, 1942.

SWING—This in form of stencil describing paste cleanser for painted surfaces. Filed Mar. 20, 1942, by General Chemical Co., New York. Claims use since Feb. 12, 1942.

Trade Marks Granted

395,726. Furniture polish. Filed by RCA Manufacturing Co., Camden, N. J., July 12, 1941. Serial No. 445,-298. Published Mar. 31, 1942. Class 16.

395,761. Leather cleaner and polisher. Filed by K. J. Quinn & Co., Boston, Jan. 5, 1942. Serial No. 450,-000. Published Mar. 31, 1942. Class 4.

395,764. Soap. Filed by Lehn & Fink Products, Inc., Bloomfield, N. J., Jan. 9, 1942. Serial No. 450,-105. Published Mar. 31, 1942. Class 4.

395,534. Glass and metal cleaner and polish. Filed by C-Lite Chemical Products, Goshen, Ind., Oct. 13, 1939. Serial No. 424,518. Published Mar. 17, 1942. Class 4.

395,536. Water softener and foaming agent. Filed by Bubbobath Co., Minneapolis, Mar. 13, 1940. Serial No. 429,549. Published Mar. 17, 1942. Class 6.

395,538. Soaps, cleaners, and sweeping compound. Filed by Foodcraft Products, Chicago, Apr. 8, 1940. Serial No. 430,529. Published Aug. 13, 1940. Class 4.

395,562. Insecticide, germicide, and disinfectant. Filed by Roberson & Sons, Cleveland, Aug. 28, 1941. Serial No. 446,633. Published Dec. 16, 1941. Class 6.

395,577. Disinfectant washing and cleaning preparation. Filed by Dixie White Washing Fluid Co., Newark, N. J., Nov. 18, 1941. Serial No. 448,723. Published Mar. 24, 1942. Class 4.

395,592. Soap. Filed by Procter & Gamble Co., Cincinnati, Dec. 8, 1941. Serial No. 449,294. Published Mar. 10, 1942. Class 4.

395,607. Scouring soap. Filed by Bon Ami Co., New York, Dec. 22, 1941. Serial No. 449,665. Published Mar. 24, 1942. Class 4.

395,609. Flea soap. Filed by Polk Miller Products Corp., Richmond, Va., Dec. 22, 1941. Serial No. 449,-700. Published Mar. 17, 1942. Class 4.

395,614. Bubble bath. Filed

You get original and different rose effects with New Rose Aldehyde

. . . offered by Albert Verley & Company for heightened sales appeal at minimum cost

Entirely fabricated in the United States from domestic materials, this new aromatic makes available to the soap perfumer an odor-distinction formerly out of the question from a cost standpoint.

In rose odors or wherever the rose note is a factor in your composition, Rose Aldehyde offers extremely interesting possibilities. Its modest price permits its use for quantity production.

Let your product be among the first to gain this new distinction, by revising present formulas or creating new ones.

♠ ♠ ♠

Write today for working sample and quotation.

Albert Verley & Co.

AROMATICS ALBERT VERLEY AND COMPANY, 232 E. OHIO STREET, CHICAGO, ILLINOIS • 114 E. 25TH STREET, NEW YORK • MEFFORD CHEMICAL COMPANY, LOS ANGELES

by Irresistible, Inc., Jersey City, N. J., Dec. 26, 1941. Serial No. 449,773. Published Mar. 17, 1942. Class 6.

395,622. Disinfectants. Filed by Fuld Bros., Baltimore, Jan. 6, 1942. Serial No. 450,011. Published Mar. 24, 1942. Class 6.

395,665. Drain pipe cleaner. Filed by Plunkett Chemical Co., Chicago, Feb. 3, 1942. Serial No. 450,686. Published Mar. 17, 1942. Class 6.

395,666. Insecticide and disinfectants. Filed by Plunkett Chemical Co., Chicago, February 3, 1942. Serial No. 450,689. Published Mar. 17, 1942. Class 6.

395,667. Foot powder. Filed by Peter Voss, Washington, D. C., Feb. 3, 1942. Serial No. 450,701. Published Mar. 17, 1942. Class 6.

395,868. Shoe polishes. Filed by K. J. Quinn & Co., Boston, Dec. 15, 1941. Serial No. 449,500. Published Apr. 7, 1942. Class 4.

395,869. Liquid material for cleaning hair after shampooing. Filed by John H. Breck, Inc., Springfield, Mass., Dec. 17, 1941. Serial No. 449,540. Published Apr. 7, 1942. Class 6.

395,879. Tooth paste. Filed Jan. 1, 1942, by Valentine Laboratories, Inc., Chicago. Serial No. 449,946. Published Mar. 31, 1942. Class 6.

395,888. Liquid soap for cleaning floor surfaces. Filed by Huntington Laboratories, Huntington, Ind., Jan. 15, 1942. Serial No. 450,228. Published Apr. 7, 1942. Class 4.

Brazilian Babassu Oil

(*From Page 25*)

quickly, we will be obliged to furnish the money for the highways. If we could afford to wait six to ten years, the State of Maranhao, if the price of babassus held up, would probably accumulate enough revenue to do the job itself, but, under present circumstances, all that they feel able to finance is the supplementary highway system.

The Director General of Railways in the State of Maranhao, Sr. Remy Archer, was next called upon by the Interventor to state his case. There is at present only one railroad line in the State. It runs from S. Luiz to Terezina, a distance of 453 kilometers, or 282 miles. It is federally owned. (At the present time 50 per cent of the babassu kernels which are exported from S. Luiz move into town on this road, according to Francisco Aguiar & Co., the largest exporters of kernels in the State. Another 25 per cent comes down the Mearim River in boats and the remaining 25 per cent moves in by miscellaneous water routes and highways.)

BRAZILIAN OIL INDUSTRY

Besides its production of babassu oil, the Brazilian oil and fat industry also embraces production of substantial quantities of palm and palm kernel oils, copra, ouricury, macauba, etc. All of these materials are of just as much interest to the American soap maker as potential raw materials as is babassu oil. A second installment of Mr. Gordon's survey on the Brazilian oil and fat industry is scheduled for our next issue, which will report fully on these other raw materials from one of the greatest natural fat reservoirs in the world.

The S. Luiz-Terezina Railroad has 32 locomotives, five of which are new. It has 85 box cars and gondolas, many in bad repair. With this equipment. Sr. Archer says he can haul 3,000 tons of babassu kernels per month. It he can get two repair shops, he can haul ten times as much, and if he gets 100 new cars, he can haul 20 times as much. But, of course, he cannot haul these increased quantities unless produced and they cannot be produced until roadways are constructed to bring the kernels to the railroad.

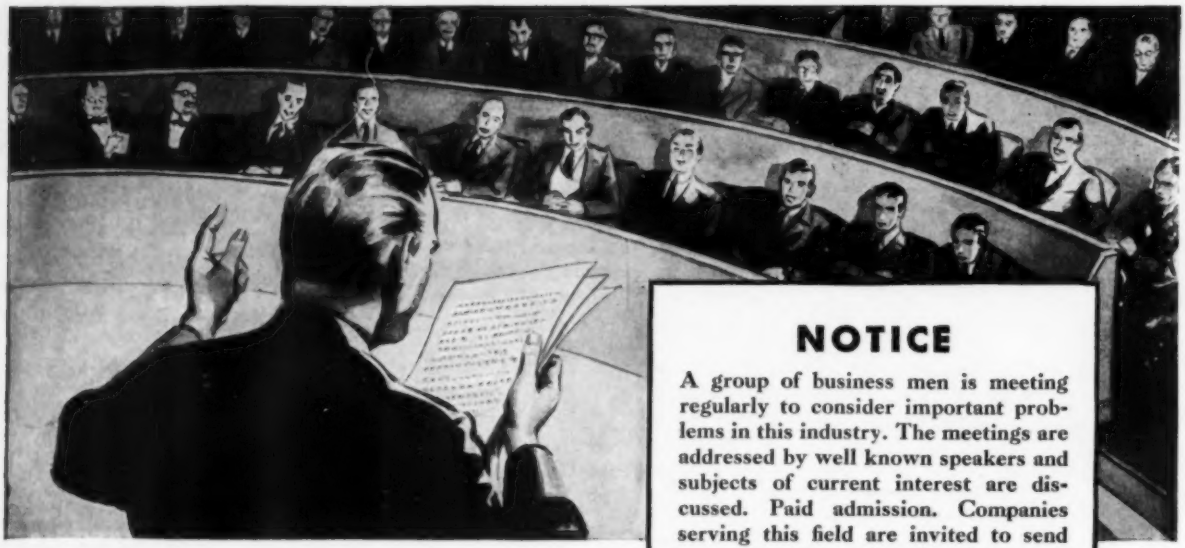
When the Vegetable Oil Mission reached Rio de Janeiro after a long trek through the intervening states of Brazil, it presented the case of the Sao Luiz-Terezina Railroad to Getulio Vargas, the President of Brazil, when an audience was granted for the purpose of receiving the recommendations of the Mission. We also presented the case of the Alcobaca-Maraba Railroad in the State of Para. This short stretch of road runs along the Rio Tocantins and its purpose seems to have been to sidestep some dangerous rapids in that otherwise well navigable river. Since, however, a ten-mile span in its center was never completed, it has not fulfilled the purpose for which it was originally built. The completion of this road will greatly facilitate the passage of babassu kernels down the Tocantins and Para River to Belem do Para.

I have not heard how this stretch of railroad fared, but was much pleased on meeting Sr. Archer in Rio de Janeiro, subsequent to our visit to Petropolis where we saw President Vargas, to learn from him that he had been assured by the Minister of Finance that he would receive the money for the rehabilitation of the Sao Luiz-Terezina Railroad—not all he needed, but nevertheless enough to make a very excellent start towards its complete rehabilitation.

IT was interesting to note that throughout the entire discussions which we had with the state officials of Maranhao over a period of several days, at no time did they manifest any uneasiness in respect to the labor situation. As previously stated, they have some reserve in the labor supply of the State. Undoubtedly, some of their confidence that sufficient labor would be forthcoming rested in the fact that a great drought has affected a large portion of three neighboring states, Ceara, Paraiba and Pernambuco. A considerable part of the population of these areas is on the move for lack of sustenance in the localities in which they live. At the prevailing price of babassus they can make an excellent living in Maranhao gathering babassus on the state domain and selling the kernels at a price that amounts to about 3½ cents per pound in our currency.

The caboclo (countryman) puts his entire family to work cracking babassus. Children of seven or eight crack as rapidly as an adult. One person can produce, on the average, about 15 pounds of kernels per day. The caboclo pays no taxes on the land because it is state owned. There is no

(*Turn to Page 54*)



NOTICE

A group of business men is meeting regularly to consider important problems in this industry. The meetings are addressed by well known speakers and subjects of current interest are discussed. Paid admission. Companies serving this field are invited to send representatives to describe their products and services.

Such a notice might well describe the issues of this publication.

Advertisers . . . get the facts about this audience

EVERY issue of this publication reaches an influential audience which welcomes news and information about products or services for their business. In these pages you are offered an opportunity to talk to this audience.

If you were going to pay for the privilege of actually talking to an audience about your business, you would want to know all about it. How many people? What is their occupation and business? Where are they from? How much did they pay to get in? Will it pay you to talk to them?

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From an investment standpoint it is just as important that you should know *all* about the people who will see your sales message when you advertise in this or any other business paper.

In order to select the right media, with the assurance that you get what you pay for and that your audience will be receptive to the particular message that you have to tell, base your selection on the verified information to be found in A.B.C. reports.

That is why we belong to the Audit Bureau of Circulations—to give advertisers audited facts and figures about the audience they will talk to when they advertise in these pages.

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Paid subscriptions, renewals, evidence of reader interest, are among many facts in A. B. C. reports that are definite guides to effective media selection. When you buy space in A. B. C. publications your advertising is safeguarded by audited circulation. Always ask for A. B. C. reports.

SOAP *and Sanitary Chemicals*

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Member of the Audit Bureau of Circulations ABC ***Ask for a copy of our latest A. B. C. report***

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RAW MATERIAL MARKETS

As of July 1, 1942

THE market for soap and sanitary chemical raw materials was marked this period by a decided slackening of interest on the part of buyers. With wholesalers and distributors reported holding heavy stocks of soaps, and with soap makers unable to sell profitably at present ceiling levels, there has been a natural reluctance on the part of the soap industry to add further to its supplies of oils and fats. The hope that some way may be found to reduce fat costs for the soap maker has contributed further to this slackened interest in buying in spite of rumors of the prospect of fat allocation.

That this quiet condition in the industry will not long continue would seem to be indicated by the report, appearing elsewhere in this issue, of an order of tremendous proportions for lease-lend soap. The Bureau of Ships will also enter the market shortly, it is reported, for a substantial quantity of salt water soap. A further indication of prospective future activity in the industry is contained in the news that the government expects the industry to produce an additional fifty million pounds of glycerin this year. Thus in spite of the fact that soap factory operation would not normally be expected to continue at previous record levels, based on civilian demand alone, there will in all probability be sufficient stimulus in government buying to keep the industry operating at a high rate.

Price changes were few in the oil and fat group this period, with most items in the list governed by fixed ceilings. At present levels of soap prices, as compared with raw material costs, many soap makers are reported to be faced with losses. They are hoping for lower tallow quotations to alleviate their situation.

Rosin quotations were somewhat higher this period, stimulated by increased demand from consumers and the report of government accumulation of naval stores stock piles.

Additional regulations governing the purchase of chlorinated solvents were announced this period. The WPB is distributing purchasers' certificate forms for use in buying carbon tetrachloride, ethylene dichloride, trichlorethylene and perchlorethylene. A purchaser buying more than one gallon of such solvents must submit two copies of the certificate to his supplier at the time of purchase.

On essential oils, readjustment of prices continued this period in the move to bring current quotations into line with the March highs. There were a number of reductions during the month, the oils affected being bay, lemongrass, origanum, patchouli, Sandalwood and thyme. Adjustments to a higher level were noted for pennyroyal, petitgrain, and sassafras.

In the insecticide raw material list attention this month was concentrated on pyrethrum which has been placed under full priority control. Pending determination as to how much pyrethrum the army and navy will require, manufacturers of household insecticide have little or no idea at the moment as to what they can expect in the way of pyrethrum deliveries over the next few months. After processors send prospective August shipping plans to Washington on July 10, and get government response to their schedules, they will have a more definite idea as to what may be expected.

Allied Asphalt Wax Division

Allied Asphalt & Mineral Corp., New York, have just added a new wax and oil division which will offer a line of synthetic carnauba waxes, amorphous mineral waxes, ozokerite waxes, ceresines, and synthetic montan waxes, as well as naphthenic acids and naphthenic soaps. H. W. Kraaz, formerly vice-president of Koster-Keunen Wax & Oil Products Co., will be manager of the new division.

Tie Up Foame Toy Plant

The plants of Foame Toy Soap Co. at Hebron, Ind., and Valparaiso, Ind., were closed last month following a replevien action instituted by Allen B. Wrisley Co., Chicago. The Wrisley firm sought to recover raw rubber and latex, valued at $15,000, which it claimed to be its property. The Foame Toy firm is operated by Albert Serewicz, Caroline Serewicz and Albert Serewicz, Jr.

Soap Price Ceilings

(*From Page* 22)

that Senator Prentiss M. Brown of Michigan was reported to have announced on June 18 that the administration would seek to revive legislation authorizing payment of subsidies to industries unable to operate under existing price ceilings. New legislation is forecast as a substitute for that which the Senate recently rejected in connection with a bill increasing the borrowing power of the Reconstruction Finance Corporation.

Whatever plan the OPA may have in mind as a solution to the soap maker's problem,. the probability is that it will be announced later this month. Meanwhile soap makers have been urged to reserve their judgment on the effect of the Price Ceiling Law until the picture is complete.

Refined Animal Tallow
FATTY ACIDS
(Distilled)

●

White Palm Oil
FATTY ACIDS
(Distilled)

●

SUPERIOR QUALITY — GUARANTEED UNIFORM

We Recover all Glycerine for War Purposes.

STEARIC ACID
All Grades

WHITE OLEINE
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OLEIC ACID
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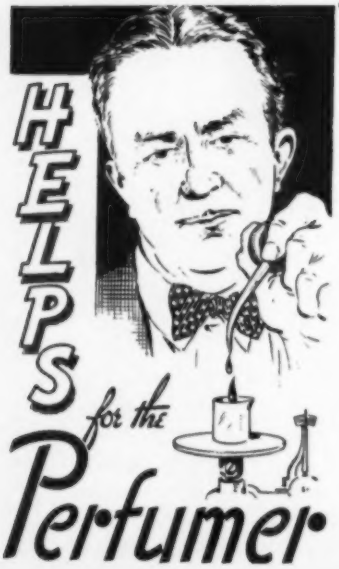

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Now obtainable from

CANADIAN SOURCE

This oil FIR CANADIAN is more fragrant than the Siberian Fir.

A test will prove that this natural oil FIR NEEDLES CANADA will open a new realm of possibility for the use of Refreshing Forest Fresh Pine Fragrances.

Whether you have ever used Oil Fir Needles (Oil Pine Needles) or not, we sincerely recommend your test of this new Canadian product.

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DREYER

119 WEST 19th STREET
NEW YORK, N.Y.

PRICES

(As of June 29, 1942)

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals

Acetone, C.P., drums	lb.	$ .08½	$ .09
Acid, Boric, bbls., 99½%	ton	106.00	128.00
Cresylic, drums	gal.	.81	.86
Low boiling grade	gal.	.81	.86
Muriatic, C. P., carboys	lb.	.08	—
Oxalic, bbls.	lb.	.11¼	.14¼
Adeps Lanae, hydrous, drums	lb.	.32	.34
Anhydrous, drums	lb.	.33	.35
Alcohol, Ethyl, drums	gal.	8.19	8.25½
Complete Denat., SD1, dms., ex.	gal.	.60	.65
Alum. Potash lump, bbls.	lb.	.04½	—
Ammonia Water, 26°, drums	lb.	.02¼	.02½
Ammonium Carbonate, tech., drums	lb.	.08¼	.09¼
Bentonite	ton	25.00	51.00
Bleaching Powder, drums	100 lb.	2.25	3.35
Borax, pd., bbls., bags	ton	50.00	75.00
Carbon Tetrachloride, car lots	gal.	.73	1.17
L. C. L.	gal.	.80	1.27
Cresol, U.S.P., drums	lb.	.11	.11¾
Creosote Oil	gal.	.141	.15½
Feldspar, works	ton	30.00	35.00
Formaldehyde, bbls.	lb.	.05¾	.07¼
Fullers Earth	ton	8.50	15.00
Glycerine, C.P., drums	lb.	.18¼	.19¼
Dynamite, drums	lb.	.18¼	.18¾
Saponification, drums	lb.	.12¾	.14¾
Soap lye, drums	lb.	.11½	—
Lime, live, bbls.	ton	6.25	13.00
Mercury Bichloride, drums	lb.	2.24	2.39
Naphthalene, ref. flakes, bbls.	lb.	.08	—
Orthodichlorbenzene	lb.	.07½	.08½
Paradichlorbenzene, drums	lb.	.11	.15
Petrolatum, bbls. (as to color)	lb.	.03½	.08
Phenol (Carbolic Acid) drums	lb.	.12½	.14¼
Pine Oils, drums	gal.	.74	1.10
Potash, Caustic, solid	lb.	.06¼	.06¾
Flake, 88-92%	lb.	.07	.07¼
Liquid, 45% basis	lb.	.02⅞	.03¼
Potassium Carbonate, solid	lb.	.06½	.06¾
Liquid	lb.	.03	.03⅛
Pumice Stone, coarse	lb.	.03½	.04¾
Rosins (net wt., ex dock, New York)—			
Grade D to H	100 lb.	3.81	3.90
Grade I to N	100 lb.	3.99	4.05
Grade WG to X	100 lb.	4.10	4.15
Rotten Stone, dom., bags	lb.	.02½	.04
Silica	ton	20.00	27.00
Soaps—			
Tallow Chip, 88%	lb.	.11¾	.12⅛
Powder, 92%	lb.	.12⅛	.12½
Powdered. White Neutral	lb.	.25½	.42
Olive Oil Paste	lb.	.40	—
Shampoo Base	lb.	.18	.20
Liquid Concentrate, 30-32%	gal.	.75	.79
Soda Ash, cont., wks., bags, bbls.	100 lb.	1.05	1.45
Car lots, in bulk	100 lb.	.90	.95
Soda Caustic, cont., wks., solid	100 lb.	2.30	—
Flake	100 lb.	2.70	2.95
Liquid, tanks, 47-49%	100 lb.	1.92½	1.95
Soda Sal., bbls.	100 lb.	1.10	1.30
Sodium Chloride (Salt)	ton	14.20	18.00
Sodium Fluoride, bbls.	lb.	.08	.09¼
Sodium Hydrosulfite, bbls.	lb.	.17	.18
Sodium Metasilicate, anhyd.	100 lb.	4.00	5.30
Granulated	100 lb.	2.50	3.55
Sodium Pyrophosphate	100 lb.	5.25	6.80
Sodium Silicate, 40 deg., drum	100 lb.	.80	1.20
Drums, 52 deg. wks.	100 lb.	1.40	1.80
Tar Acid Oils, 15-25%	gal.	.27½	.33½
Triethanolamine	lb.	.18	.20
Trisodium Phosphate, bags, bbls.	100 lb.	2.70	4.30

Oils — Fats — Greases

Babassu, tanks, futures	lb.	.11⅛	Nom.
Castor, No. 1, bbls.	lb.	.14	.14½
No. 3, bbls.	lb.	.13¾	.14¼
Coconut (without excise tax)			
Manila, tanks, N. Y.	lb.	No Prices	
Tanks, Pacific Coast, futures	lb.	No Prices	
Copra, bulk, coast	lb.	No Prices	
Corn, tanks, West	lb.	.12¾	—
Cottonseed, crude, tanks, mill	lb.	.12¾	—
PSY, futures	lb.	.13⅞	.14⅛
Fatty Acids—			
Corn Oil, tanks, Chicago	lb.	.14	.14½
Coconut Oil, tanks, Twitchell, Chi.	lb.	.18½	Nom.
Cotton Oil, tanks, Chicago	lb.	.14	—
Settled soap stock, Chicago	lb.	.03⅞	.04
Boiled soap stock, 65%, Chi.	lb.	.04⅞	.05
Foots, 50%, Chicago	lb.	.03⅞	.04
Castor Oil, split, tanks, N. Y.	lb.	.20¾	.21¼
Linseed Oil, split, tanks, N. Y.	lb.	.18½	—
Distilled	lb.	.21	.21½
Myristic acid, distilled, tanks, N.Y.	lb.	.19	.19½
Palm Oil, white, tanks, N. Y.	lb.	.13	.13½
Single distilled	lb.	.12	—
Soybean Oil, split, tanks, N. Y.	lb.	.16	—
Distilled	lb.	.19½	.20
Red Oil, bbls., dist. or sapon.	lb.	.1330	.1420
Tanks	lb.	.1245	—
Stearic Acid, saponif.			
Double pressed	lb.	.1580	.1680
Triple pressed	lb.	.1885	.1985
Greases, choice white, tanks	lb.	.0971¼	—
Yellow	lb.	.0929⅝	—
Lard, city, tubs	lb.	.12½	.12¾
Linseed, raw, bbl.	lb.	.1390	.1470
Tanks, raw	lb.	.1300	.1320
Olive, denatured, bbls., N. Y.	gal.	4.20	4.30
Foots, bbls., N. Y.	lb.	.19½	Nom.
Palm, Sumatra, cif. New York, Tanks	lb.	No Prices	
African, tanks, ex. ship	lb.	.09	Nom.
Palm, kernel, f.o.b. San F.	lb.	No Prices	
Peanut, crude, tanks, mill	lb.	.13	Nom.
Soya Bean, domestic, tanks, crude	lb.	.12½	Nom.
Stearin, oleo, bbls.	lb.	.1054	—
Tallow, special, f.o.b. N. Y.	lb.	.0957⅜	—
City, ex. loose, f.o.b. N. Y.	lb.	.0971¼	—
Teaseed Oil, crude	lb.	No Prices	

KRANICH

Shampoo

Liquid Olive Oil Soap

Liquid Vegetable Oil Soap

40% and 30% (Only)

To replace coconut oil soaps

•

Powdered Soap

U. S. P. Castile (Only)

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Potash Soaps

Soft Potash 40%

Hard Potash 70%

U.S.P. XI Green

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Scrub Soaps

Plain, Pine, Sassafras

KRANICH SOAP COMPANY

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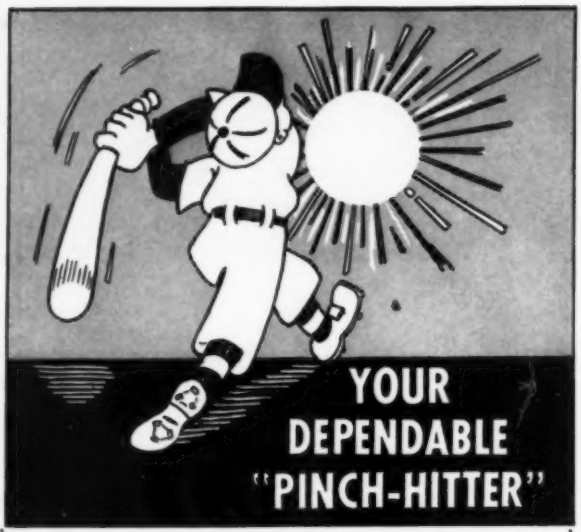
SOAPS



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Once upon a time "substitute" was a sinister word. Today, however, a good substitute may prove a life-saver. We may, happily, have just what you're after, but if not—Well, we know our SOAPMAKERS' CHEMICALS and what they're supposed to do—And when exactly what you want just can't be had, we can usually suggest a substitute that may help you over the hurdle and save the day. Call on us—often!

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ISCO PALM WAX No. 1, and the

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INNIS, SPEIDEN & COMPANY

Established 1816

A National Institution

117-119 Liberty Street • NEW YORK

CHICAGO • CLEVELAND • CINCINNATI

BOSTON • PHILADELPHIA • GLOVERSVILLE, N. Y.

(As of June 29, 1942)

Essential Oils

Almond, Bitter, U.S.P.	lb.	$3.50	$3.75
Bitter, F.F.P.A.	lb.	4.75	5.00
Sweet, cans	lb.	2.40	2.50
Anise, cans, U.S.P.	lb.	3.50	3.75
Bay, 55-66% phenols, cans	lb.	1.60	2.10
Bergamot, coppers	lb.	32.00	Nom.
Artificial	lb.	2.25	6.50
Birch Tar, rect., cans	lb.	—	—
Crude, cans	lb.	—	—
Boise de Rose, Brazilian	lb.	5.00	5.25
Cayenne	lb.	—	—
Cade (juniper tar), drums	lb.	1.50	Nom.
Cajeput, tech, drums	lb.	—	2.10
Calamus, cans	lb.	—	—
Camphor, Sassy, drums	lb.	—	—
White, drums	lb.	—	—
Cananga, native, cans	lb.	17.00	17.50
Rectified, cans	lb.	18.25	20.00
Cassia, Redistilled, U.S.P.	lb.	10.50	12.00
Cedar Leaf, cans	lb.	1.05	1.35
Cedar Wood, light, drums	lb.	.80	1.00
Citronella, Java, drums	lb.	—	—
Citronella, Ceylon, drums	lb.	1.30	1.70
Clove, U.S.P., cans	lb.	1.85	2.10
Eucalyptus, Austl., U.S.P., cans	lb.	1.05	1.30
Fennel, sweet, cans	lb.	4.20	—
Geranium, African, cans	lb.	30.00	Nom.
Bourbon, cans	lb.	24.00	—
Turkish (Palmarosa)	lb.	5.25	5.50
Hemlock, cans	lb.	1.20	1.25
Lavender, 30-32% ester, cans	lb.	—	—
Spike, Spanish, cans	lb.	4.25	4.35
Lemon, Ital., U.S.P.	lb.	—	Nom.
Cal.	lb.	3.25	—
Lemongrass, native, cans	lb.	3.50	4.20
Linaloe, Mex., cases	lb.	4.25	—
Nutmeg, U.S.P., cans	lb.	4.75	6.00
Orange, Sweet, W. Ind., cans	lb.	6.00	6.25
Italian cop	lb.	8.00	Nom.
Distilled	lb.	1.70	—
California, expressed	lb.	3.25	—
Origanum, cans, tech	lb.	2.75	2.90
Patchouli	lb.	8.00	8.50
Pennyroyal, dom.	lb.	—	—
Imported	lb.	3.15	3.25
Peppermint, nat., cans	lb.	5.50	5.75
Redis., U.S.P., cans	lb.	6.00	6.25
Petitgrain, S. A., cans	lb.	1.95	2.20
Pine Needle, Siberian	lb.	3.00	3.25
Rosemary, Spanish, cans	lb.	2.25	2.30
drums	lb.	2.10	2.15
Sandalwood, dom., dist., U.S.P.	lb.	5.75	6.75
Sassafras, U.S.P.	lb.	2.00	2.20
Artificial, drums	lb.	2.00	—
Spearmint, U.S.P.	lb.	3.10	3.25
Thyme, red, N. F.	lb.	2.60	3.25
White, N. F.	lb.	2.85	3.50
Vetiver, Java	lb.	42.00	50.00
Ylang Ylang, Bourbon	lb.	—	—

Aromatic Chemicals

Acetophenone, C. P.	lb.	$1.55	$1.60
Amyl Cinnamic Aldehyde	lb.	—	—
Anethol	lb.	2.25	2.40
Benzaldehyde, tech.	lb.	.45	.55
N. F. VI	lb.	.85	.95
Benzyl, Acetate	lb.	.59	Nom.
Alcohol	lb.	.63	.75
Citral	lb.	5.50	7.00
Citronellal	lb.	2.75	3.25
Citronellol	lb.	7.00	7.25
Citronellyl Acetate	lb.	—	—
Coumarin	lb.	2.75	3.25
Diphenyl oxide	lb.	.43	.50
Eucalyptol, U.S.P.	lb.	2.00	2.50
Eugenol, U.S.P.	lb.	2.75	2.80
Geraniol, Soap	lb.	1.10	1.50
Other grades	lb.	1.50	3.50
Geranyl Acetate	lb.	—	—
Heliotropin	lb.	5.25	Nom
Hydroxycitronellal	lb.	10.25	10.50
Indol, C. P.	lb.	28.00	30.00
Ionone	lb.	2.75	3.95
Isoborneol	lb.	.81	.90
Iso-bornyl acetate	lb.	.80	.95
Iso-Eugenol	lb.	—	—
Linolool	lb.	6.75	7.00
Linalyl Acetate	lb.	5.50	7.25
Menthol, natural	lb.	13.00	13.50
Synthetic, U.S.P.	lb.	13.00	—
Methyl Acetophenone	lb.	—	—
Anthranilate	lb.	2.20	2.35
Paracresol	lb.	—	—
Salicylate, U.S.P.	lb.	.35	.40
Musk Ambrette	lb.	4.00	4.45
Ketone	lb.	4.15	4.60
Xylol	lb.	1.40	1.80
Phenylacetaldehyde	lb.	5.00	6.00
Phenylacetic Acid	lb.	1.85	1.90
Phenylethyl Alcohol	lb.	2.10	2.50
Rhodinol	lb.	—	—
Safrol	lb.	2.25	2.45
Terpineol, C.P., drs.	lb.	.40	—
Cans	lb.	.43	—
Terpinyl Acetate, 25 lb. cans	lb.	.87	—
Thymol, U.S.P.	lb.	3.00	Nom.
Vanillin, U.S.P.	lb.	2.35	2.75
Yara Yara	lb.	1.80	1.85

Insecticide Materials

Insect Powder, bbls.	lb.	.29	.30
Pyrethrum Extract			
20 to 1	gal.	5.90	6.00
30 to 1	gal.	8.85	9.00
Derris, powder—4%	lb.	.32	—
Derris, powder—5%	lb.	.35	—
Cube, powder—4%	lb.	.32	—
Cube, powder—5%	lb.	.35	—
Squill, red, dried	lb.	.85	1.00

Waxes

Bees, white	lb.	.61	—
African, bgs.	lb.	.49	—
Refined, yel.	lb.	.59	.60
Candelilla, bgs.	lb.	.38	—
Carnauba, No. 1, yellow	lb.	.88	.89
No. 2, N. C.	lb.	.84	.85
No. 3, Chalky	lb.	.77	.78
Ceresin, yellow	lb.	.13½	.18
Montan Wax, bags	lb.	.45	.46
Paraffin, ref., 125-130	lb.	.0520	.0560

(*From Page 47*)

drying process required, as is the case with copra. His responsibilities, therefore, consist simply of gathering the nuts from under such trees as he can get at, cracking them and getting the kernels to market, and that's where the "farm-to-market" roads are needed.

A nut is cracked as follows: Placing the blunt end of a sharp axe on the ground, the handle of the axe is steadied by the weight of the leg of the man, woman or child who is cracking the nut. The nut is placed against the sharp edge of the axe and with one sharp tap of a short, heavy stick, the nut is split in half. These halves are again halved with a single blow, with an eye to preventing injury to the nut. The caboclo's family generally works as a team. The fragments of the split nut are passed on to other members of this family team and with a jackknife or the sharpened end of an old spoon or any sharp instrument the kernels are pried loose from the shell fragments, placed in a basket and they are ready for the market.

The caboclo and his family do such a neat, rapid job of cracking babassu kernel by hand that the writer soon became convinced, after watching numbers of them in various areas, that the matter of finding an efficient nut cracking machine to crack babassu kernels is not the paramount necessity that it first appeared to be. It is true that a practical cracking machine would be of enormous value in developing the babassu nut industry of Brazil, but the lack of such a machine is not such an important feature as is the lack of roadways into the enormous babassu concentration area.

THE writer started to agitate for roads for the State of Maranhao at Rio de Janeiro with all the U. S. Government officials whom he could reach there. This campaign for roads for Maranhao was continued upon his return to Washington.

The United States Government is negotiating with Brazil for its production of babassu kernels for the next four years. These negotiations as of the date on which the writer last heard of them embodied a proposal to lend the Brazilian Government $200,000 for the construction of highways in the babassu producing areas. Unless this sum of money is increased and such money as is advanced is expended in a single area, such as the State of Maranhao, we will be apt to fall into the error of the military strategists in the Far East of providing "too little and too late." The United States wants babassu kernels now and the way to get them is to build an adequate system of roadways into the babassu producing areas. The State of Maranhao provided the Vegetable Oil Mission with a comprehensive map of the proposed highways. A check of these highway routes by an air survey can quickly reveal whether or not they run into the right areas. If not, the road building program can be directed there. From the writer's observation the highway plan of the State of Maranhao seemed well designed for the job of getting the babassu kernels to market.

The State Government of Maranhao estimates that it costs about $1,200 per mile to build adequate roadways. Since a conservative estimated cost of building roads of this "farm-to-market" type in the United States may be said to approximate about $10,000 per mile, it can be seen that the Brazilians' estimate is not unreasonably high.

The road building program of the State Government of Maranhao would require an expenditure of about $1,700,000. Obviously, between this suggested amount and the $200,000 which the United States Government would lend the Brazilians for road building purposes, there is too wide a disparity particularly since it must be considered that this state is more than twice the area of Missouri. It is true that under a system of bonuses for increased production, the Brazilians would have more funds for road building in time to come, but in the writer's estimation the initial sum should be considerably increased and the expenditures centered in a single state. The adjacent State of Piaui is as large as Oregon and with Para twice again as large as Texas, the $200,000 would only scratch the surface. It would be merely a token.

There has been some thought in Washington that an exploitation company is needed to develop the babassu resources of Brazil. This is not the case, as the situation does not require it. The idea of an exploitation company has proven impracticable in the case of rubber and would prove equally impracticable in the case of babassus. Whatever is done in any of the states of Brazil must be done with the whole hearted cooperation of the State Government of that particular state.

Under the emergency conditions under which the United States must work at present in obtaining an adequate supply of babassu kernals, it would be disastrous to attempt to sidestep the necessity of working in closest collaboration with the State Governments and the various factors of the business element among the Brazilians, whether they be up country collectors of kernels or large scale operators in the trading centers. All of them are a part of the business machinery. Just as it was found impossible to sidestep these men when we returned to Brazil for rubber, it will be found impossible for any kind of exploitation company to avoid dealing with them in the babassu areas. The handling of the problem through the intermediary of the Brazilian Federal Government and the State Governments is essential if for no other reason than that the Government of the United States is involved at our end of the negotiations. In the instance of a state such as Maranhao, its intelligent government officials fully realize that the development of the babassu business is closely interlocked with the future prosperity of the state. They will, therefore, work zealously in the upbuilding of a large babassu kernel business.

The Brazilian Federal and State Governments have no objection to American corporations and interfere in no way with the entry of foreign capital, but they will resent the thrusting upon them of Brazilian collaborators of American corporations who are in any sense persona non grata with the State Government. Pitfalls such as these must be avoided by all those earnestly desiring to see babassus move out of Brazil in volume.

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PRODUCTION

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, Oil & Fat Industries.

Nature of Emulsions

AN emulsion is a fine dispersion of one liquid in another in which it is insoluble or nearly so, the product usually appearing homogeneous to the naked eye and behaving in many respects as a single liquid substance. Emulsifying agents are substances such as soaps, colloidal clays like bentonite, and various other materials. They often act in a fraction of 1 per cent, but occasionally 5 per cent or more, and show much specificity,—an agent which will serve in one case being useless in another. The emulsifying agent functions by forming a protective layer,—believed to be monomolecular in the case of soaps, around each particle of the dispersed phase at the oil-water interface, thereby preventing coalescence of the globules.

Theoretically, if two immiscible liquids are in contact and agitated, either can become the dispersed phase; in practice it seems that the determining factor is usually the emulsifying agent. It has been shown however, that dual emulsions of the same system can be formed according to the conditions,—that is, either oil-in-water, or water-in-oil. The phase present in excess tends to become the continuous phase, but, especially at equal phase ratios, either type may be formed according to the method of emulsifying.

If an emulsifying agent such as sodium oleate is added to oil and water, the molecules of soap orient themselves at the interface in the form of a monomolecular film, with the hydrophyllic portions-sodium-directed towards the water, and the lyophyllic end-oleate or hydrocarbon radical-towards the oil. Emulsifying agents are usually substances which are soluble in one phase but insoluble or very little soluble in the other, although they are probably adsorbed on the latter at the interface.

In emulsion formation by mechanical shaking, rapid stirring in a machine of the whisk type, forcing through a fine orifice under pressure, etc., the liquid is first broken up into cylindrical rods of gradually increasing length compared with the diameter. As soon as the former exceeds 3 1/7 times the latter, the cylinders become unstable and break up into spheres. These tend to coalesce unless protected by the film of the emulsifying agent,—rapidity of emulsification depends on how quickly the film forms.

It is an experimental fact that several short, intermittent periods of agitation, separated by periods of rest, often give a more stable emulsion in less time than does one continuous operation. With homogenizers and colloid mills, the forces acting on the globules are enormously greater than with hand-shaking or whisking, and these considerations do not apply.

Soaps of potassium, sodium, and ammonium promote oil-in-water-type emulsions in decreasing order of effectiveness, potassium being the best. Soaps of calcium, magnesium and higher-valent cations such as aluminum, promote the water-in-oil type. The metal element may be replaced by organic bases such as triethanolamine. Besides oleates, stearates, palmitates and laurates,—saponified rosin and sulfonic acids are frequently used, especially naphthalene sulfonic acids and sulfonated castor oil. A recent addition is naphthenic acid, a petroleum product. Commonly used stabilizers include caseinates, glue, gelatin, albumen, starches, gum arabic, gum tragacanth, methyl cellulose, etc. Most of these are colloidal and promote emulsions having colloid-like properties. H. W. Rudd. *Manufacturing Chemist* 13, 82-6 (1942).

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Oils and fats are refined successfully by the Clayton process, using soda ash to neutralize free fatty acids and thus cut down refining losses to

those approaching the theoretical. In this process, crude oil pumped from a supply tank is preheated in flow and mixed with 15-20° Be. soda ash solution, preferably in an amount at least double that required to neutralize the free fatty acids. The mixture then passes through a coil which may be further heated, then is sent to a dehydrator under a vacuum of 27-29½ inches, where the water and any carbon dioxide from the reaction, are removed. The mixture of dried soapstock and oil is then pumped at a constant regulated pressure to a coil. It is mixed with a solution of soda ash of 6-20° Be. just before reaching the coil, being then led through the coil and so to a centrifuge for separation of the mixture. Absence of the use of caustic soda in the refining avoids saponification of neutral fat. Peanut oil, tallow and other oils have been processed in this way with encouraging results. M. Mattikow. *Oil & Soap* 19, 83-7 (1942).

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By-product Acids

A method of recovering useful compositions from the by-product acids obtained in the manufacture of sebacic acid from castor oil involves washing the by-product acids with a dilute solution of a strong inorganic acid such as sulfuric acid, drying the washed product, and subjecting it to vacuum distillation to yield a volatile portion and a residue which does not distil at 270° C. and 4 mm. of mercury pressure. The acids obtained may be used in soap manufacture and as substitutes for usual fatty acids in various compositions. Harold C. Cheetham and David A. Rothrock. U. S. Patent No. 2,267,269.

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Hydrolyzing Fats

In a continuous countercurrent method for hydrolyzing fats such as tallow, there is introduced into the fat a substantial amount of water in the form of steam, while maintaining the fat under sufficient pressure to cause the steam to condense. Temperatures of 365-600° F. and pressures of 150-1600 pounds per square inch may be employed. Norman G. Robisch, to the Procter & Gamble Co. U. S. Patent No. 2,267,750.

Bleaching Powder Composition

The behavior of bleaching powder does not altogether meet the usual explanation of its composition as $Ca(OCl)_2$.

$$2Ca(OH)_2 + 2Cl_2 \rightarrow Ca(OCl)_2 + CaCl_2 + 2H_2O$$

After all other methods of analysis had failed, it was found by the X-ray diffraction method that commercial bleaching powder consists simply of a mixture of the basic chloride, $CaCl_2$, $Ca(OH)_2$, H_2O with a variable hypochlorite phase. The difficulty of further chlorination and the fact that the mixture is not markedly deliquescent, are accounted for by the presence of the basic chloride formulated above, which appears to be a very stable substance. C. W. Bunn. *The Chem. Age* 46, 221 (1942).

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Fatty Acid Determination

For therapeutic and commercial soaps the following method is recommended for the determination of fatty acids. Dissolve 3 grams of soap in 45 cc. of distilled water, heating if necessary, and pour the solution into a separatory funnel. Add 5 cc. of a 5.0 Normal hydrochloric acid solution to decompose the soap and precipitate fatty acids by dissolving 15 grams of sodium chloride in the contents of the funnel. After cooling, add 20 cc. of petroleum ether boiling at 65° C. to dissolve fatty acids accumulating at the surface. Separate the petroleum ether layer, dry by means of anhydrous sodium sulfate, filter, and evaporate the solution at room temperature. Weigh the residue after 24 hours as pure fatty acids. Evaporation at room temperature is especially important for soaps which contain much volatile fatty acid. Gyorgy Kedvessy. *Ber. ungar. pharm. Ges.* 17, 506-14.

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Re-use of Old Kettles

Old equipment thought to be slated for discard may have to be recalled and put into use under the present emergency conditions. Rusted kettles should be cleaned first by a going over with a stiff steel brush to remove loose soil and rust particles. The kettle should then be filled with water, heated nearly to boiling, and enough sulfuric acid added to give a concentration of 3-4 per cent. The vessel is thoroughly scrubbed while filled with the dilute acid. The acid is then drawn off, the vessel boiled up twice with fresh water, and once with a dilute soda solution to neutralize any remaining acid. After such cleaning, some types of iron equipment can be protected by spraying with a synthetic resin,—or with aluminum metal or a suitable aluminum alloy, with the aid of a metal-powder pistol. *Am. Perfumer & Essen. Oil Review* 44, No. 5, 51 (1942).

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Washing Rayon

Many rayon garments are launderable if properly treated. If the laundryman is not doing a good job on rayon, where should he make changes? Not necessarily in washing, because the washing temperatures used by the industry are usually correct. The changes must be made in extraction. There are certain rayons that can be extracted heavily and finished properly afterward, but such articles as satin or taffeta slips are extracted to such an extent in the average laundry that proper finishing is almost impossible later. The only way to get out those breaks and creases is to iron or press the material while it is very wet. W. E. Coughlin. *Laundry & Dry Cleaning J. of Canada* 22, No. 5, 10-11, 24-5 (1942).

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Cyclohexanol in Soap

Cyclohexanol, an oily liquid boiling at 158-63°C. is soluble in water only to the extent of 6 per cent, but is very hygroscopic. Cyclohexanol is a solvent for most types of waxes, fats and oils, and is used in formulating soaps for the dry-cleaning, laundry and textile trades. Such soaps, made either by incorporation of the solvent in sulfonated oil or in ordinary water-soluble soaps, have increased wetting and emulsifying powers, and are capable of emulsifying mineral oils, thus making greater detergency possible. These soaps are usually neutral in character and offer good resistance to lime and other metallic soaps. Steven Yates. *Textile Colorist* 64, 231 (1942).

Glycerine Recovery

A SOAP company manufacturing mostly toilet soap and laundry soap flakes, has recently modernized its plant to increase quality and output and reduce labor. Of particular interest is the glycerine recovery set-up.

Lye removed from the soap kettles flows to large steel storage tanks outside the building. To simplify cleaning the bottoms of the tanks are at an angle to the ground. After 24 hours the cooled lye is pumped to cypress tanks, where alum treatment coagulates soap and albuminous materials. The treated lye is passed through a filter press to remove this coagulum, and the clear filtrate run to cypress storage tanks. From here it goes to the evaporators, a second lye treatment not being necessary because of the high quality of fats and oils used.

The glycerine is concentrated to 40-50 per cent in double-effect evaporators. The salt which precipitates during concentration, is collected in drums below, along with some glycerine. This slurry of salt and glycerine, kept in constant motion, is blown to a slurry tank feeding the centrifuge. Salt is separated in the centrifuge, washed, and dumped onto a belt conveyor below, which carries it to wooden brine tanks in the basement. The brine is reused in salting out soaps. The weak glycerine liquors leaving the centrifuge are returned to the evaporators for concentration to 80 per cent.

The half-crude glycerine from the double-effect evaporator is discharged to settling tanks and then fed to two single-effect evaporators for concentration to 80 per cent soap-lye crude.

Like all process industrial plants, this soap plant has its corrosion problems and uses special construction materials to increase the life of equipment and prevent discoloration of its products. Nickel-clad steel has been found satisfactory for the section of the soap kettle ordinarily above the liquor level. The glycerine-lye evaporators contain copper tubes, and 5 per cent nickel-steel castings. Red brass is used for all pipe lines handling salt brines or salt slurries.

Centrifugal pumps have proved most satisfactory for handling the soap and glycerine liquors. James A. Lee. *Chem. Met. Engineering* 49, No. 5, 125-8 (1942).

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Percarbonate in Soap Powder

Carbonates containing peroxidized oxygen may be of three types, monoperoxybicarbonates, $(NaCO_3)_2$, (two isomeric forms containing 10 per cent of active oxygen; monoperoxycarbonates, Na_2CO_4, containing 13 per cent of active oxygen; and more stable carbonates containing hydrogen peroxide of crystallization such as Na_2CO_3, H_2O_2, ½ H_2O or Na_2CO_3, 1½ H_2O_2, containing respectively 11 and 15 per cent of active oxygen, formed by causing sodium carbonate solution to interact with hydrogen peroxide, and treating the product with alcohol. Commercial sodium percarbonates, which tend to replace sodium perborate in soap powders, contain 10 or 14 per cent of active oxygen, according to grade, and appear to belong to the third type. J. B. Angus. *Ind. Chem.* 18, 28 (1942).

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Filter Aid

An excellent decolorizing agent and filter aid is produced by coating with carbon the surface area of diatomaceous silica, and then activating. Such a product called "M-23," made by the Dicalite Co. of Tarrance, Cal., is intended to be used on a throwaway basis and has been applied with great success in the sugar refinery.

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Alkali on the Skin

Injury of the skin by alkali frequently appears as eczema in people working with lime and cement, housewives, and those employed in laundries and in the soap industry. The skin condition was studied by applying blotting paper impregnated with caustic soda solution and phenolphthalein, both 1:2000, to the skin of the patient and noting the time required for decolorization.

The patients could be divided into three groups on the basis of this test; those in which neutralization was rapid (3.75 minutes), a middle group (3.75-5.75 minutes), and those showing slow neutralization (over 5.75 minutes). The skin of artists and painters having psoriasis, neutralized the alkali slowly. Patients having constitutional eczema neutralized the alkali rapidly, from which it follows that they are probably less sensitive to treatment with ointments and to external injury than persons with other types of eczema. Men who did not have, and had not had eczema, neutralized the alkali slowly; this was obviously due to an occupationally conditioned hypofunctioning of the skin. M. Zingsheim. *Dermatol. Wochschr.* 110, 258-62.

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Ammonia Refining of Oils

To refine palm oil, coconut oil or other ester-type oils containing free fatty acid, the latter is neutralized with ammonia. In multistage countercurrent extraction, the oil is brought into contact with the alcohol in the first extraction stage and an amount of ammonia approximately equivalent to the free acid content of the oil. In the last extraction stage from which refined oil is recovered, an additional amount of ammonia between 10 per cent and 40 per cent of the amount added in the first stage, is introduced. Willem J. D. van Dijck. U. S. Patent No. 2,268,786.

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New Type Detergent

A product said to make the use of bleach unnecessary in many laundry classifications, is offered under the name of "Pensol-B" by the Pennsylvania Salt Co. of Philadelphia. The detergent was originally designed for strong soap-boiling action and dirt removal where bleach is not used. Intended primarily for the break operation, it may be used with or without soap, or followed by soap stock or built soap. It has been suggested for colored work because of qualities which cause it to absorb dirt, and to help in absorbing bleeding dyes.

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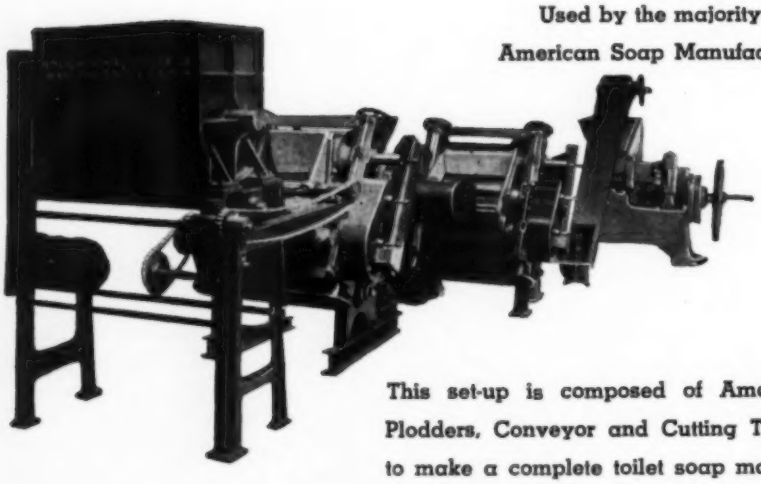

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Value of Soap Builders

A PROCEDURE was developed whereby the comparative effectiveness of alkalies as soap savers in hard water could be studied under fixed conditions, the method being related to the formation of permanent suds by the soap and alkali. The work was limited to a study of the effect of the alkalies on sodium oleate and sodium stearate at 20° and 60° C. for sudsing in water containing 300 parts per million calcium carbonate equivalent hardness, one-third of which was present as magnesium salts.

The more alkaline silicates, caustic soda, and the phosphates resulted in the greatest soap economy in the concentration range of 0.1 per cent or less. Caustic soda and soda ash produced large adherent soap curds which were difficult to disperse. Any curds developed with the silicates or phosphates were very minute and so well dispersed that they were apparent only as turbidity.

All of the alkalies studied, with the exception of borax, showed some ability to decrease the amount of sodium oleate or sodium stearate required to form permanent suds in hard water. The silicates increased in value with decreasing SiO_2:Na_2O ratio. Crystalline metasilicate and sesquisilicate were about as effective with sodium stearate at 60° C. as with sodium oleate at 20°C.,—all the other alkalies were less so. Both the silicates and phosphates may be employed to prevent formation of hard lime-soap curds. Caustic soda and soda ash are not satisfactory in this respect. Although it cannot safely be assumed without trial, that similar results could be obtained under greatly changed conditions, the effectiveness of the metasilicate and sesquisilicate in a concentration of 0.1 per cent or less, as compared to that of the more costly pyro- and polyphosphates should be of special interest to laundries. Caution should be exercised, however, in applying the findings of this work to other detergent problems under different conditions, without experimental confirmation. Harry L. Bolton. *Ind. Eng. Chem.* 34, 737-41 (1942).

Hardening Oils

Olive oil, palm oil and cottonseed oil can easily be hardened by mixing with liquid sulfur dioxide and heating to 110-115°C. The sulfur dioxide does not combine with the product, which has a satisfactory color, odor and taste. Isomerization but not polymerization, has occurred, — the iodine number, refractive index and density are not changed. The product can be separated into 2 fractions having different freezing points, the lower-melting fraction usually contains the less-saturated components and may be treated again with sulfur dioxide, or used for other purposes. H. I. Waterman, C. van Vlodrop and W. J. Taat. *Chemie & Industrie* 44, 285-8; 45, 608.

Glycerine Substitutes

Glucose, hexite (a mannitol-sorbitol solution), propylene glycol, and glycerogen, are compared as substitutes for glycerine in skin preparations. Glycerogen is prepared by reduction of glucose, sorbitol, starch, cellulose, peat, straw or sawdust. The glycerogen used contained 40-42 per cent of glycerine, 15-25 per cent of propylene glycol, 20-30 of hexite, 6 of water, and 1-4 per cent of dihydric alcohols. The pH of glycerogen, which is between 8.4 and 8.5 can be brought to the neutral point when desired, by phosphoric acid. Glycerogen is the most promising of the carbohydrate substitutes for glycerine. Cl. Bauschinger. *Fette und Seifen* 48, 126-8; through *Chem. Abs.*

Society Chem. Industry Elects

The American Section of the Society of Chemical Industry has elected Dr. Foster D. Snell as chairman for the year 1942-1943. Other officers of the section are: Dr. Norman A. Shepard, vice chairman; Cyril S. Kimball, honorary secretary, and J. W. H. Randall, honorary treasurer. The following new committee members were elected to take the place of retiring members: Edward R. Allen, Francis J. Curtis, Dr. Donald Price, Archie J. Weith, and Dr. Lincoln T. Work.

New Antioxidant for Soap

Monsanto Chemical Co., St. Louis, has just announced a new antioxidant for soap designated as "SA 326." It was developed to replace other anti-oxidants now unavailable because of raw material shortages. The new product is described as an organic amine, made from raw materials which are liable to continue to be available in ample quantities. With application tests successfully completed, and the product now in commercial production, it is described as a light gray to white powder that does not affect color, odor or other characteristics. It is recommended for use in extremely small quantities, varying from 0.04 per cent to 0.01 per cent on the weight of the soap, the recommended amount varying inversely with the titer of the soap. SA 326 is basic in character and reacts with oleic, stearic and other fatty acids. Therefore it is added after these acids have been saponified. The addition may be made at any of several points in the soap making process: in the kettle after the liquors are drawn; in plodding; or on amalgamation or roller mills. The product may be introduced as an alcoholic solution, as a water slurry, or with other solvents.

Restrict Lab Equipment

Purchase of laboratory equipment in the production of which scarce materials are used has been subjected to restrictions under the terms of General Limitation Order L-144. New equipment of the restricted classes can be used only for approved purposes.

APHA To Meet Oct. 27-30

The American Public Health Association will hold its seventy-first annual meeting in St. Louis, Mo., October 27-30.

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New Salt Water Soap Specification

THE Bureau of Ships, U. S. Navy Department, has just issued a new interim specification 51D7 (INT) for Detergents; Salt-Water, Bar Form. It is reported that large purchases are anticipated under the new specification shortly and producers are advised to familiarize themselves with its provisions at once. Copies of the complete specification can be obtained by addressing H. F. Galindo of the bureau at Washington, D. C. Detail requirements are as follows:

E-1. Salt-water detergent, bar form, shall be a uniform mixture of substantially equal parts of a synthetic detergent and a well-made, boiled, settled kettle soap. The mixture shall be compounded by heating and mixing in a crutcher, if necessary with the addition of a small amount of water, to produce a uniform product which shall be cast into blocks. After cooling and solidifying the blocks shall be cut into bars of the desired shape and weight.

E-1a. *Soap.*—The soap shall be made chiefly from tallow, but may include 10 per cent of other domestic fats or oils, or rosin. The soap shall contain not more than 0.7 per cent of glycerine, based on the anhydrous soap content.

E-1b. *Synthetic detergent.* The synthetic detergent shall contain 50 per cent or more of active organic ingredient which shall foam and cleanse in sea water. The active ingredient shall preferably be a member of the class represented by the general formula,

$$A—R—SO_3Na,$$

in which A is an alkyl radical containing 10 or more carbon atoms, and R is an aromatic or aliphatic grouping. The active ingredient shall be completely stable in the presence of moist soap, as compounded in the detergent bar, during one year of storage under normal conditions.

E-2. *Composition.*—The composition of salt-water detergent, bar form, shall be as shown in Table I.

E-3. *Performance.*—Salt-water detergent, bar form, shall remove the soil from a standard soiled sample of woolen cloth, using synthetic sea water, when tested as specified in paragraph F-2b.

E-4. *Lather.*—Salt-water detergent, bar form, shall produce a net volume of foam of not less than 45 ml, when tested as specified in paragraph F-2c.

E-5. *Dermatitis.*—Salt-water detergent, bar form, shall not cause dermatitis when tested as specified in paragraph F-2d.

The paragraphs from the testing section dealing with performance of the soap, lather and dermatitis, are as follows:

F-2b(2)c. *Soiling procedure.*—The cloth shall be uniformly soiled with the soiling formula to a shade which gives a reflectance (per cent white) of 35 to 40 when read on the Lange reflectometer, or a reflectance of .——to——. when read on the Hunter reflectometer. This is best accomplished by alternately dipping the wool cloth in the soiling solution and then passing it through a wringer for about 10 repetitions. The wringer pressure should be heavy. The soiled cloth should be dried in an air oven at 80° to 100° C. for 1 hour. Since the soil may become more firmly fixed on long aging, the soiled cloth must not be used if over 3 months old.

F-2b(3). *Ability of detergent to remove soil.* Prepare a 2 per cent solution of the salt-water detergent (based on a product having 25 per cent moisture content) in the synthetic sea water. Warm if necessary to completely dissolve the detergent and then cool to between 20° and 25° C. Pour 250 ml of the detergent solution into an 8-inch evaporating dish or shallow pan. Wash a 4-inch square piece of soiled wool fabric by squeezing it vigorously 50 times in the detergent solution within 2 minutes. Rinse in lukewarm distilled water and dry. Wash an unsoiled square of wool fabric by exactly the same procedure in a fresh 250 ml portion of the detergent solution, rinse, and dry. The previously soiled square shall be within 5 per cent of the reflectance of the unsoiled square.

F-2c. *Ability to lather or foam.*—Prepare a 1 per cent solution of the salt-water detergent (based on a product having 25 per cent moisture content) in synthetic sea water. Introduce 50 ml in a 250 ml graduated cylinder and adjust the temperature to between 20° and 25° C. Close the end of the cylinder and shake vigorously 50 times within 2 minutes. Place the cylinder in an upright position on a table, wait 30 seconds, and read the net volume of foam (total volume minus volume of liquid). This volume shall be not less than 45 ml.

F-2d. *Dermatitis.*—Two gauze pads of equal size, and approximately 1-inch square, shall be prepared. One pad shall be saturated with a 2 per cent solution of the salt-water detergent in sterile distilled water. The other pad shall be saturated with a 2 per cent solution in sterile distilled water of a coconut oil soap in accordance with Federal Specification P-S-611, listed in section A. The two pads shall be fastened in adjacent positions on the inside of the forearm by means of waterproof adhesive tape which completely covers the pads. At the end of 8 hours the pads shall be removed and the areas compared for irritation.

TABLE I.—COMPOSITION

	Per cent by weight	
	Max.	*Min.*
Anhydrous, salt-free, soda soap	—	30
Anhydrous, salt-free, synthetic detergent	—	20
Moisture and matter volatile at 105°C.	25	—
Free alkali, calculated as sodium hydroxide (NaOH)	0.1	—
Matter insoluble in distilled water	0.3	—
Rosin	4.0	—
Sugar	None	—
Sodium sulphate, sodium chloride, and other neutral inorganic salts	Balance	

Cleaning Compound Spec

A proposed new specification for cleaning compound for use on Painted surfaces has just been released by the National Bureau of Standards, so that reactions of manufacturers and users may be obtained before submission of the specification to the Federal Specifications Executive Committee. Comments and any possible suggestions for revision of the specification should be addressed to F. W. Smither, chairman, Technical Committee on Detergents, Federal Specifications Executive Committee, National Bureau of Standards, Washington, D. C., from whom copies of the new specification can also be obtained for inspection.

The specification covers two types of products—soap-abrasive and synthetic, each type to be capable of being applied with a damp cloth or sponge. The following requirements are tentatively fixed for the soap-abrasive type: matter volatile at 105° to 110° C not to exceed 65% by weight; free acid calculated as oleic not to exceed 0.5% by weight; free alkali, none; alkaline salts calculated as sodium carbonate, not to exceed

(*Continued on Page 67*)

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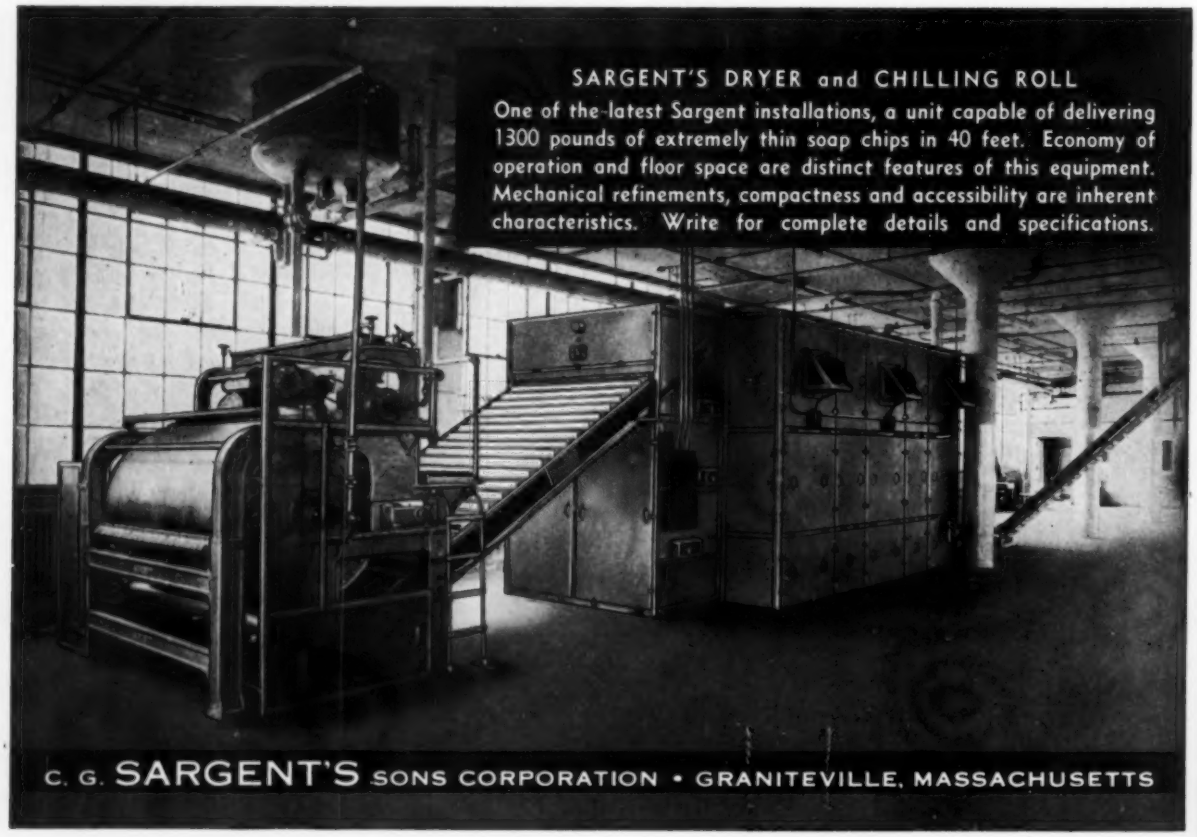
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PRODUCTS

Household Cleanser

A cleanser for household utensils and appliances is made of 18 parts of diatomaceous earth, 3 of magnesium carbonate, 2 of soft soap, 1 of soda ash, 1.5 of crude sugar, and 30⅝ parts of water. For certain purposes the diatomaceous earth is left out. To prepare it, the soft soap is dissolved in approximately half the water, the soda ash and the sugar in the other half. The diatomaceous earth and the magnesium carbonate are mixed intimately and then kneaded with the strained solutions. Leslie J. Howlett. Australian Patent No. 111,451.

Filled Grained Soap

To hot molten soap is added up to 20 per cent of dry, powdered sodium bicarbonate. The processing of the soap is finished as usual. The addition of bicarbonate as a filler saves fatty acids, and the soap is not injurious to textiles. Clemens Bergell. German Patent No. 682,068.

Paint Cleaner

Painted and varnished surfaces can be cleaned with a solution containing lime, soda ash and a starchy material such as dextrin. The product is diluted with cold water for use. G. Henryon-Merdrignac. French Patent No. 853,420.

Scouring Material

A spongy regenerated cellulose material is impregnated with a powdered material such as pumice stone to give a scouring and polishing device. Russell B. Kingman. U. S. Patent No. 2,268,403.

Sealer for Oil Containers

A sealing material for oils and fats consists of a mixture of 70-5 per cent of rosin, 10-5 per cent of rubber, and the rest an inorganic filler such as silica. This can be used for sealing containers such as condensers filled with oil or fat. Robert Bosch G.m.b.H. German Patent No. 682,241.

British Soap Industry

(*From Page 29*)

pulped paper may be used, giving packages poor appearance and quality. All hard soaps come entirely unwrapped, flakes and some powders are retailed loose. Supply of board for outer cartons is limited to 25 per cent of pre-war, thus the work of the group service, which collects used containers (paying five cents each) and returns them to the appropriate factories for re-issue, has become vital.

Salesmen now pound pavements! Until May, 1942, the allowance of gasoline, when pooled, was just enough for business calls. Greatly reduced fuel rations now force many representatives to lay up their cars, others to walk between town calls and thus save their few precious gasoline coupons for rural journeys.

All merchandising schemes such as samples, coupon offers, bargain bundles, large size "economy" packages, consumer contests, etc., are forbidden. Product displays are regularly made in the shops, with window bills being printed on the reverse side of obsolete posters. Our short advertising films feature high ranking radio and film stars. There is, of course, no commercial radio in Britain, and the Continental radio advertising in English ceased at the beginning of war. Press and magazine publicity is maintained insofar as space shrinkage permits. The usual theme teaches soap economy, aims at maintaining brand names and goodwill.

Most, that is, about 88 per cent of our pre-war sales and office employees are with the uniformed services. The list includes salesmen and district managers, female office workers and office managers. All those with dependents have their service pay supplemented to equal salaries and can return to their jobs when demobilized. Many others have been "directed" into munition-making. Most sales territories are now handled by women 31-40 years old, by men 41-50, or by men of low medical category.

Finding, hiring, and training suitable replacements has been a big and continuous job, yet our every sales section has been kept filled. In this way we differ from our British competitors, who, when an area becomes vacant, usually rely thereafter on mail contact and/or activities of wholesalers.

It would be very easy to sell our full production without a sales staff at all, yet all worthy outlets including indirect buyers have been, and still are, visited every month. This enterprise and perseverent building and maintaining of goodwill through difficult times, will, we hope, reap a rich reward when supplies again become unlimited.

Cleaning Compound Spec.

(*From Page 65*)

5% by weight; insoluble siliceous material, not less than 25% nor more than 35%; anhydrous soap calculated as soda soap, not less than 3.5% by weight. Physical and performance tests are also provided.

The synthetic type product must be completely soluble in distilled water at 15°-20° C when tested as specified. Soap shall not be present and the solution must have not more than a slight turbidity in the concentration recommended. Total alkalinity shall be not more than 0.8% calculated as NaOH. A boiled solution of the material shall show a titration value within 0.5 milliliter of that for an unboiled solution when tested as specified. The pH of a 1% solution by weight of the material in distilled water shall be not less than 5.5 nor more than 9.0. Total matter insoluble in ethyl alcohol shall not exceed 50 per cent by weight. A test for determining stability to hardness is specified, as are additional physical and performance tests.

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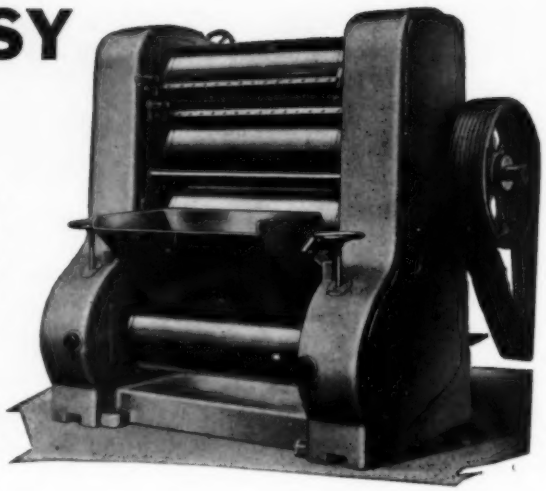

SORRY we cannot offer you any new LEHMANN equipment at this time because our plant and our organization are engaged in their most important undertaking. We are very happy that our facilities could be converted speedily to war production, enabling us to do a real wartime job.

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EQUIPMENT

IF YOU want additional information on any of the items described below or if you want any of the bulletins, catalogs, etc., write to the MacNair-Dorland Co., Inc., 254 West 31st St., New York, mentioning the number of the item.

890—Acid Resistant Paint

Harrington Paint Co., East Cleveland, Ohio, has just announced a new and highly acid resistant paint, "Rust Eter No. 66." It is said to withstand soap and caustic liquors up to 70 per cent, which the manufacturers say is far superior to the resistance of any normal finish. The product is said to dry in less than an hour and to be practically chemically inert.

891—Soap Powder Booklet

Chemical Manufacturing & Distributing Co., Easton, Penna., manufacturers of soap and scouring powders, detergents and other soap products, described their private brand soap and scouring powder service for the trade in a recent issue of their "Target News," company house booklet, including sample labels and types of powders, telling of their output of six million pounds of soap powder per year of seven different grades.

Bims Golf Winners

The New York Bims gathered at the Winged Foot Golf Club the afternoon of June 23 for their second golf outing of the 1942 season. Among the prize winners were: Fred C. Theile and Fred J. Beyer of P. R. Dreyer Inc.; K. L. Patterson of Stanco Distributors; Harry W. Heister of George Lueders & Co.; Edward A. Bush of Bush Pan America; Alec J. Dedrick of Van Ameringen-Haebler, Inc.; and Emmet M. Kaylor of National Can Corp.

As usual, all prizes were paid in War Bonds. Incidentally, the Winged Foot outing was the first in a series of tournaments to be sponsored by the War Golf Fund. This new group, of which Peter L. Forsman, BIMS member, is national director of tournaments, is to organize golf's contribution to the war effort. The next BIMS tournament is to be held July 28 at Plandome, Long Island.

Westvaco Consolidates Subsidiaries

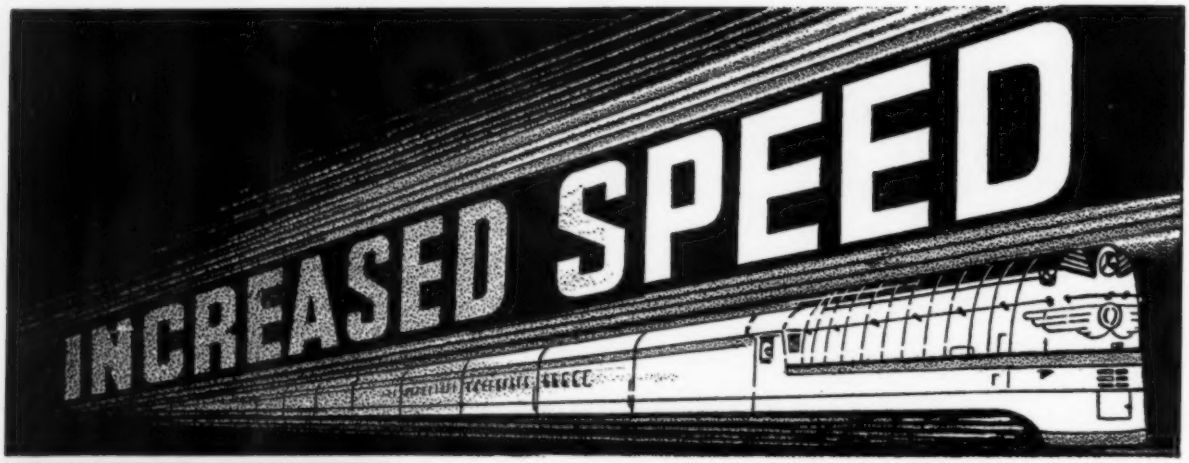
Sales and technical services of the Warner Chemical Company division, the California Chemical Company division, the Magnesol Company division and the National Kellastone Company division of Westvaco Chlorine Products Corp. were merged with those of the parent company on July 1. The purpose of the change was to attain more efficient operation and no changes in personnel or functions are involved. With this consolidation of activities, Westvaco plants at Carteret, N. J.; South Charleston, W. Va., and Newark, Calif., will be more closely tied together. Westvaco's extensive magnesite mining operations at Luning, Nev.; Gustine, Calif.; Livermore, Calif.; Patterson, Calif., and Chula Vista, Calif., will also be integrated into closer contact with the parent company.

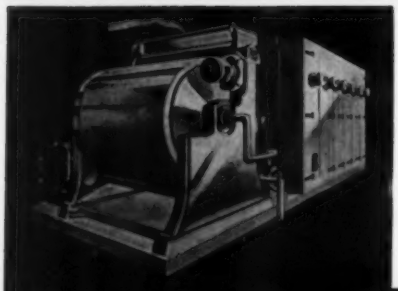
Principal offices of Westvaco Chlorine Products Corp. will continue to be in the Chrysler Building, New York, where the company occupies two floors. Branch offices are located in Chicago; Greenville, S. C., and Newark, Calif. Officers are William B. Thom, president; Max Y. Seaton, executive vice-president and technical director; Louis Neuberg, vice-president in charge of sales, and Maurice Gilbert, secretary and treasurer. W. N. Williams is in charge of Westvaco production while J. Rivers Adams is sales manager.

Frank Huisking Joins Army

Frank R. Huisking, secretary and director of Conti Products Corp., castile soap, New York, has just joined the army. He is the third son of Charles L. Huisking, Conti head, to join the armed forces. Frank J. Schaider, who has been in charge of the beauty preparations end of the business, has just been named sales manager, succeeding William J. Schlosser, who resigned July 1.

Three generations in a soap family—from left to right, Theo. B. Robertson, Jr., vice-president of Theo. B. Robertson Products Co., Chicago; Theo. B. Robertson III, and Theo. B. Robertson, Sr., founder of the Robertson firm over forty years ago, and its president. The Robertsons are soap makers from father to son, and now promise to extend the record to grandson. Wonder how a soap maker's son feels about washing behind his ears.





In producing flakes for granulated soaps, toilet cakes or packaging, high speed output can often be an item of great saving. With the New Proctor Flake Soap System, from the hot liquid soap in the kettle or crutcher to the dried flakes requires only 6 to 14 minutes and capacities may be obtained from 750 to 6000 lbs. per hour, according to flake thickness, character of soap, etc. At this stepped-up production, quicker deliveries are assured and there are tremendous savings in floor space and equipment. Complete details are contained in a new 16-page illustrated catalog that is yours for the asking.

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★**DRYMET** (REG. U. S. PAT. OFF.) **Anhydrous Sodium Metasilicate**
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Dryorth is a concentrated, trigger-action, high pH detergent silicate with excellent penetrating and wetting-out properties. It has speedy, dirt-loosening, prolonged suspending-emulsifying power.

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PATENTS

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Complete copies of any patents or trade-mark registration reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine and Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

No. 2,281,784, Insecticide, patented May 5, 1942 by Albert C. Mohr, Berkeley, Calif., assignor to Stauffer Chemical Co., San Francisco. An insecticide composition containing as an essential ingredient, an antimonyl derivative of a saturated monobasic aliphatic acid containing an alpha hydroxy group.

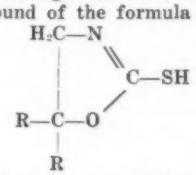
No. 2,282,907, Parasiticide, patented May 12, 1942 by William P. ter Horst, Packanack Lake, N. J., assignor to United States Rubber Co., New York. An insecticide, fungicide and germicide preparation containing as an active constituent, an alpha-aroyl beta-amino-ethane compound selected from the class consisting of chemicals of the formula

$$R—CO—CH(R')—CH_2—Y$$

where R is an aryl or chloroaryl group; R' is hydrogen or alkyl; and Y is the residue of an amine from the class consisting of primary and secondary amines, the amine residue being joined to the adjacent methylene group through the amine nitrogen atom, and water soluble salts of such chemicals.

No. 2,282,988, Process of Moth-proofing, patented May 12, 1942 by Joseph W. Creely, Oaklyn, N. J., assignor to Eavenson & Levering Co. The method of moth-proofing a fibrous substance which comprises applying to such a substance a compound hardenable by the action of an aldehyde added together with an organic base, and applying in a separate step a moth poisoning sulphonic acid compound, the hardenable substance being hardened in place on the fibrous substance to bond the organic base to the fibers, which base serves in turn to couple on the sulphonic acid compound.

No. 2,282,931, Insecticidal Mercapto-Oxazolines, patented May 12, 1942 by Herman A. Bruson, Philadelphia, assignor to Rohm & Haas Co., Philadelphia. An insecticidal composition containing as an active ingredient a compound of the formula

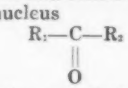


wherein R is a lower alkyl grup.

No. 2,283,199, Detergent, patented May 19, 1942 by Lawrence H. Flett, Hamburg, N. Y., assignor to Allied Chemical & Dye Corp., New York. A mixture of alkyl derivatives of an aromatic sulfonate of which the alkyl groups correspond with the hydrocarbons of an aliphatic hydrocarbon mixture at least 80 per cent of which boils between 210° and 320° C. and over a maximum range of 55° C., and obtainable by a process comprising halogenation of the aliphatic hydrocarbon mixture to form mixed alkyl halides, and condensation of resulting mixed alkyl halides with an aromatic compound followed by sulfonation.

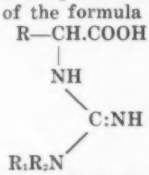
No. 2,283,456, Process for Separating Unsaponifiable Substances from Their Mixtures or Compounds with Saponifiable Substances, patented May 19, 1942 by Hermann Pardun, Hamburg-Harburg, Germany, assignor to the firm Noblee & Thorl G.m.b.H., Hamburg-Harburg, Germany. In a process for separating mixtures of compounds of unsaponifiable and saponifiable matter, the step of saponifying such mixture or compound with an aqueous solution of a basic agent, melting anhydrous soap, injecting the aqueous saponification product into the molten soap, whereby water and a portion of unsaponifiable matter are removed and the molten soap becomes anhydrous, and distilling off the remainder of the unsaponifiable matter from this soap in high vacuum.

No. 2,283,471, Organic Insecticide, patented May 19, 1942, by James William Swaine, Bayside, N. Y., assignor to General Chemical Co., New York. A contact insecticide comprising an organic compound containing not less than 11 and not more than 13 carbon atoms and consisting essentially of the nucleus



R_1 representing an alkyl group and R_2 representing an alkyl, an aryl, or an aralkyl group.

No. 2,284,086, Detergent, patented May 26, 1942 by Walter P. Ericks, Cos Cob, Conn., assignor to American Cyanamid Co., New York. A detergent composition comprising a compound of the formula



in which R is an aliphatic radical containing more than three carbon atoms and R_1 and R_2 are members of the group consisting of hydrogen and aryl, alkyl and hydroxyalkyl radicals, and a water-soluble soap.

—— • ——

Aid in Metal Cleaning

An improved wetting and emulsifying agent for use in connection with all types of alkaline metal cleaners has been developed by Hercules Powder Co. The new material, known as "Dresinate," assists aqueous alkaline solutions intended to replace chlorinated solvents, now scarce because of the shortage of chlorine. The penetrant is a finely divided, uniform powder, is available in almost unlimited quantities, and costs less than the common emulsifying agents used by the metal industry. Addition of 3-15 per cent of the product to an alkaline cleaning solution, while it slightly reduces the alkalinity, is said to increase the detergency, causing the liquid to wet the metal surface evenly, whether it is free or oily.

—— • ——

Amide Wetting Agents

The amides corresponding to the general formula RCOX in which RCO represents the residue of an aliphatic carboxylic acid comprising 8-12 carbon atoms and X reprsents the residue of a secondary amine which does not contain salt-forming groups, are excellent wetting agents. The amides are used in admixture with dispersing agents. I. G. Farbenind. A.-G. French Patent No. 852,792.

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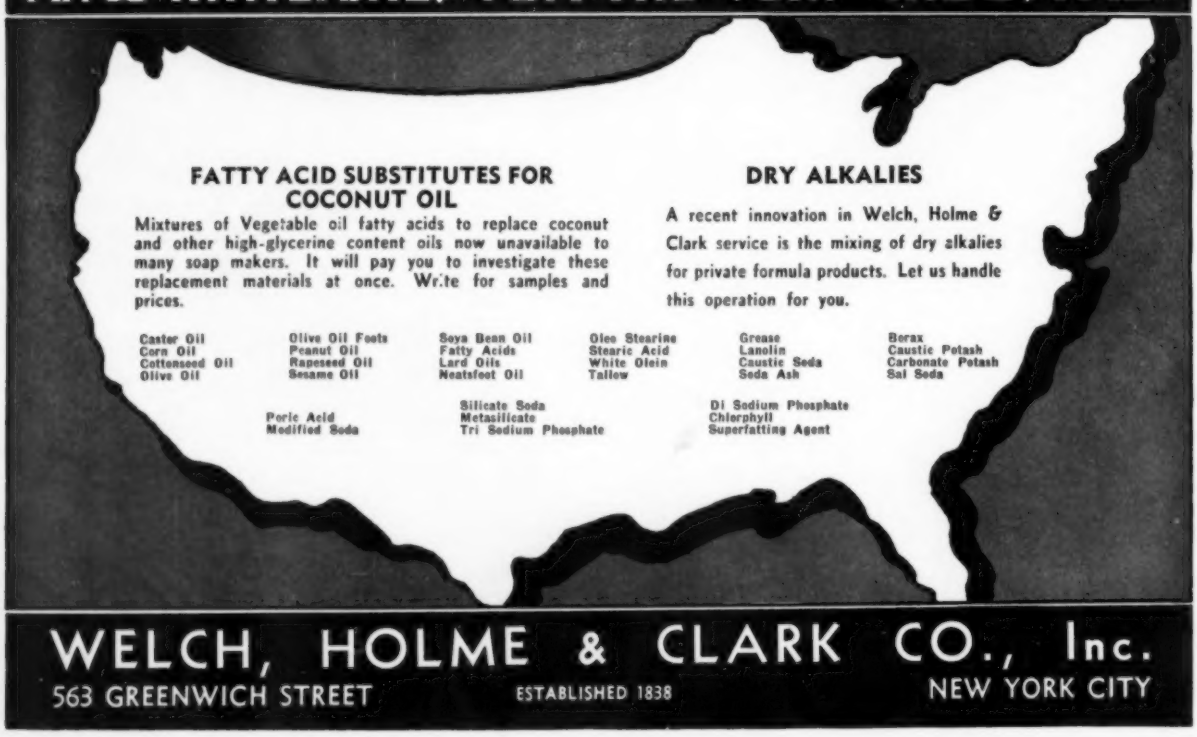

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Metallic Soaps

(*From page 27*)

trolled agitation and introduction of reacting solutions so that equipment such as appears in Figure II is most advantageous. Though the proper precipitation technique insures minimum occlusion of salts and soda soaps, thorough washing to remove surface impurities is required. Finally, the hydrated soap is dried in driers such as are shown in Figure III designed so that rapid and complete drying is accomplished using a temperature-humidity cycle such that oxidation, discoloration, sintering, and similar undesirable effects are obviated.

Fused soaps are prepared by reacting a complex, organic monovalent acid with a metal compound having an anion which can combine with a hydrogen ion to form a volatile compound. Metal oxides or hydroxides are most common. As an example:

$$M(OH)_2 + 2H.\overline{FA} \rightarrow M\overline{FA}_2 + 2H_2O$$

where $\overline{FA}$ is an organic acid anion and M is a divalent metal.

From the production viewpoint the requirements are similar to those mentioned for dehydrating precipitated soaps. In this case, as in the former, water must be volatilized and discoloration and scorching prevented.

THE widespread uses of metallic soaps can be traced in most every case to a dependence on one of three particular properties. The properties are (1) ability of the soap to dissolve in organic solvents and supply metal cations, (2) ability of the soap to influence the characteristics of liquids in which it is dispersed, and (3) the physical characteristics of the soap. Probably the greatest quantities of soaps are sold for purposes where the metal cation is essential. This, however, does not mean that the organic part of the molecule is unimportant, since it is that which determines the solubility in organics. Rather, it merely indicates that the cation is of primary importance.

Catalysis

Metallic soaps have long been utilized to catalyze or alter the velocity of organic reactions. Though the literature mentions use as catalysts in polymerization, oxidation, hydrogenation, metathetic, and hydrolytic reactions, it is in the first two reactions where they find most application. Positive oxidation and polymerization catalysts, particularly, assume a position of great importance as driers in the paint and varnish industry. Thus, when incorporated in films containing unsaturated glycerides or similar compounds, they accelerate the solidification of the film and alter the course of the chemical reactions occurring in the film.

Metallic soaps have found some uses in the liquid phase oxidation of petroleum hydrocarbons to alcohols, aldehydes, acids, etc. Acting in a similar capacity, soaps have been added to lubricating oils so as to promote complete combustion of partially oxidized oil and so prevent formation of gum and carbon deposits with the attending "ring sticking."

As negative oxidation catalysts the soaps of tin, chromium and other metals have been utilized in lubricating and transformer oils.

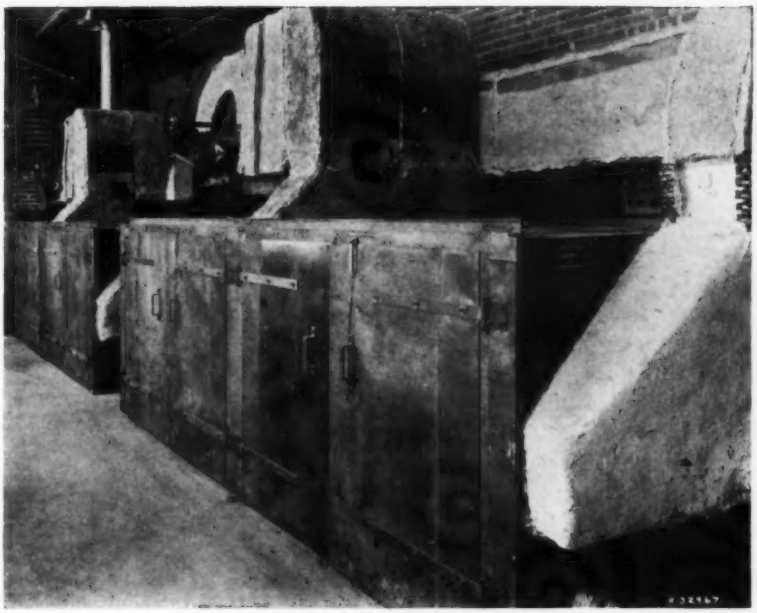

Figure III

Fungicidal Applications

Metallic soaps are peculiarly fitted for fungicidal application because of their water insolubility and the ease with which they may be decomposed to liberate metal ions by the acids liberated during fungus growth processes. A multitude of materials such as cloth, rope, wood, concrete, etc., may be treated, the soaps used usually being those of zinc or copper, the latter being about five times as effective as zinc. The potency of these materials has been recognized by both the American and British Governments and tremendous quantities of naphthenates and other soaps are being produced for the protection of sand bags and camouflage nets.

Glazing

In the ceramic industry, metallic soaps have been used for many years as coatings for ceramic glazes. They may be diluted easily to very low metal concentration, so that very thin films of oxide or metal are deposited on removal of the organic material.

THE uses just mentioned depend essentially on the metal present in the soap. There are many other important uses in which the whole soap molecule seems of importance. This seems to be the case where the characteristics of liquids, usually common solvents such as mineral oils, vegetable oils, mineral spirits, etc., are radically altered by the inclusion of soaps. Among the properties altered are vis-

cosity, electrical conductivity and surface tension.

Wetting and Dispersing

Metallic soaps are widely used to modify the wetting and dispersing properties of industrially important materials. The activity of these substances seems to rise from the polar nature of the molecule. Thus, the typical soap consists of a highly polar end group which includes the metal, and two or more non-polar chains. This unusual structure produces a molecule which exhibits, among other effects, unusual orientation.

The wetting and separation of pigment aggregates into a deflocculated state has long been a problem in the paint industry. The addition of small amounts of such polar materials as metallic soaps increases tremendously the wetting power of non-polar vehicles. Monomolecular films in which the heteropolar soap acts as a bridge between the polar pigment and non-polar vehicle tend to form. Unfortunately, soaps vary in their effect on different pigments, so that no prediction of usefulness is possible. Rather, empirical testing must be resorted to.

Extreme Pressure Agents

Extreme pressure compounds include some of the finest examples of the polar nature of metallic soaps. These materials, of which lead naphthenate is an excellent example, are added to lubricating oils which must operate under conditions of high load and high shearing action. When most or all of the petroleum oil has been squeezed from between the moving surfaces, the polar or metal end of the soap remains anchored to the metal surface while the hydrocarbon tails of the soap glide upon one another.

A use similar to pigment dispersion is that of dispersing organic gels. During the heat bodying of drying oils or resins based on drying oils, polymerization, or the combination of small molecules to form larger molecules, occurs. Though a high degree of polymerization in the kettle is desirable if a rapid drying paint film is to be produced, the solubility of polymers unfortunately is rather low. To avoid undesirable gelation or heterogeneity and yet allow polymerization, the metallic soaps of zinc and calcium are often cooked into such materials.

Viscosity Adjusting

One of the most interesting uses of metallic soaps has been as a thickener for various solvents. A specific case, typical of the application, is the formation of greases by thickening high boiling petroleum hydrocarbons. However, the thickening of drying oils or paints so as to develop a false body in a paint at low pigment concentration and so secure good brushing and levelling, are likewise good examples. Thickening may occur (1) by true solution of the soap, (2) by formation of pastes consisting of microscopic soap crystals in the solvent, and (3) by formation of true elastic gels. The second and third mechanisms produce maximum thickening while the latter gives the most stable system. The mechanism by which soap gels form is said to consist of a penetration of the hydrocarbon tails of the soap by the solvent molecules so that a sponge-like network is formed.

THE physical characteristics of metallic soaps determine the third major class of uses. For this group it is not the chemical structure of the soap nor its characteristics in solution, but rather the nature of the deposited film which is of interest.

Flatting Agents

In recent years there has been a definite trend away from high gloss paints, enamels, and lacquers for interior finishes. To secure the desired flatness, metallic soaps, especially the stearates, are milled to a very fine particle size. They are incorporated into the film forming vehicle and, on drying of the film, a surface of microscopic roughness results. Such a surface diffuses incident light rather than reflecting it specularly so that a low gloss surface results.

For use as flatters, metallic soaps having the proper solubility, refractive index, and melting point, are required if effective, low haze flatting is to be secured.

The use of zirconium and chromium soaps to retard the chalking of paints containing titanium dioxide pigment is another interesting application. It seems logical to suppose that this effect is a function of the ultraviolet light transmission of these soaps.

Adjusting Organic Film Hardness

Great quantities of metallic soaps, chiefly the resinates, are used to increase the hardness and thus the abrasion resistance of organic films such as paints and varnishes. Such materials have the advantage of reasonable price, low acidity and constant supply. Some soaps such as zinc resinate contribute high gloss and promote pigment wetting as well.

The uses enumerated are by no means comprehensive, but rather are only suggestive of the ways in which metallic soaps may be applied.

—— ♦ ——

Rapeseed Oil Treatment

The refining of rapeseed oil with sulfuric acid, deodorization at high temperatures, and air blowing, were not effective. The best results are obtained by hydration, removal of the sediment, heating to 80-85° C., neutralization with alkali of 28-30° Be. in 150 per cent excess, removal of soap stock, blowing with steam, and drying with infusorial earth. Hydrogenation in autoclaves was carried out with a fresh catalyst, added in two portions. I. I. Sorokin, N. A. Ivanova and P. K. Bogush. *Khim. Referat. Zhur.* 1940, No. 3, 119.

—— ♦ ——

Capillary-active Agent

A capillary-active agent is produced by sulfonation of 1-chloro 9, 10-octadecylene. F. Guenther, H. Haussmann and B. v. Reibnitz, to General Aniline & Film Corp. U. S. Patent No. 2,267,731.

—— ♦ ——

Lava Process for Coconut Oil

The manufacture of coconut oil directly from fresh coconut meat by the Lava process is commercially feasible. Pedro E. Torres. *Coconut J.* 1, No. 3, 7.

—— ♦ ——

Emulsifier

Magnesium carbonate is used to disperse oils, waxes and the like in water. Leslie J. Howlett. Australian Patent No. 111,378.

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- ☐ Our budget is ..... per gallon of spray

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INSIDE NEWS

JULY PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y. 1942

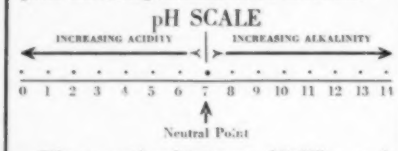
National's Research Field Service Watches the pH

A canner readily understands that the methods of canning and the processing times and temperatures employed for the different types of fruits and vegetables are not arbitrarily decided. There are many factors to be considered, and considerable experimental work must be done before a new process can be worked out. Each member of the Research Field Service, during his period of training in the laboratory, gets real experience conducting such experiments. This means that the Field Men who operate directly with the canners are equipped to recount, step-by-step, the tests and experiments made in the Laboratory which decided the recommended procedure.

When packing new products in the laboratory, the acidity or alkalinity is the first thing to be established since this determines whether high or low temperature processing, i.e., sterilizing, should be used. Different equipment is required for the different types of sterilizing. This condition of acidity or alkalinity is of importance to these Field Men and the Canner, not only as it applies to new products, but also in their examination of products already canned. In the Bacteriological Laboratory, it also serves as a helpful means of detecting spoilage in some products.

To correctly express the acid intensity or alkaline intensity of a product the small letter p and capital letter H were adopted. When combined to "pH" these become the symbol for this very important condition.

To take the mystery from "pH", let it be said that all degrees of acidity and alkalinity are expressed on a scale of numbers ranging from 0 to 14, known as the pH scale. The exact neutral point is number 7, which incidentally is the pH of pure distilled water. Numbers from 7 to 0 represent increasing acidities, whereas numbers from 7 to 14, express increasing alkalinities, as illustrated:

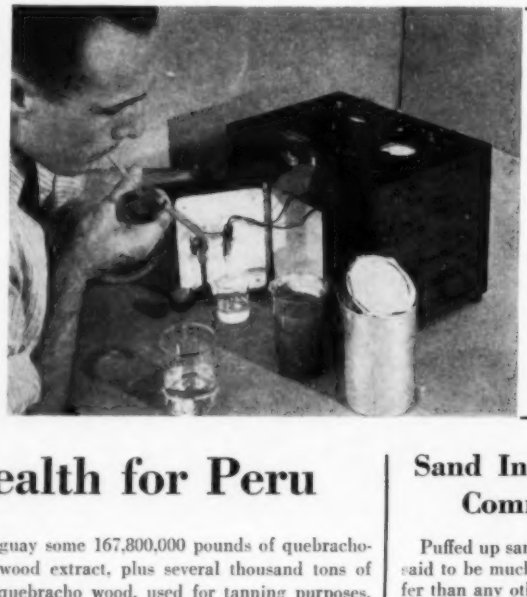


When considered in terms of "pH", a product such as orange juice, with a pH of about 3.5, is more acid than tomato juice which has a pH of about 4.2.

In canning the pH factor is very important, because the acidity of food products governs, to a large extent, the time and temperature used in the packing process. Fruits are usually more acid (have a lower pH) than vegetables, and can be processed at boiling temperatures (212°F.) or below. Most vegetables, on the other hand, which are less acid than fruits, and range on the pH Scale from about 5.2 up to 6.6, have to be processed by heating in closed retorts, under pressure, at temperatures up to 252° F. for proper preservation.

The pH of foods may be determined by color changes of special dyes or by electrical measurements with an instrument such as is illustrated in the photograph.

Adaptation of the use of pH in the food and other industries is another milestone in the progress of science. "RESEARCH IS ORGANIZED THINKING." (162)



Using the latest type of equipment, as shown in the photograph, the operator, places about a 1/6 oz. sample into a special cup. After inserting the electrodes into the sample cup, the door is closed, and by manipulation of the knobs on the panel of the instrument, the pH is obtained from a direct reading scale.

Tara Means Wealth for Peru

The wild tara bush, source of an extract for tanning leather, is developing into a new source of wealth for Peru. The tara bush is a close cousin to the divi-divi found in the Caribbean countries. It bears a long pod filled with seeds. The pod and pulp that surround the seeds have a tanning content of 50 to 60 per cent. That the world offers a large market for tanning extracts is shown by the fact that the United States alone in the first 9 months of 1941 imported from Argentina and Paraguay some 167,800,000 pounds of quebracho-wood extract, plus several thousand tons of quebracho wood, used for tanning purposes. Purchases of tanning extracts from such sources as Madagascar, India, Borneo, South Africa and Europe now are halted or hampered on account of war. The tanning business of the United States in 1939 was greater than that of all Europe, including the United Kingdom. (163)

Sand Insulation Reaches Commercial Stage

Puffed up sand is a new insulating material said to be much more resistant to heat transfer than any other known substance. Production of the material has recently reached the commercial stage. Known technically as silica aerogel, the material is now being used chiefly where large temperature differences exist, such as in high-temperature laboratory furnaces and extreme low-temperature freezing chambers. (164)

(Advertisement)

BY NATIONAL CAN

JULY PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y. 1942

Fish May Die From "Shell Shock"

"Shell Shock" is seen as a possible cause of the unexplained death of many herring along the east coast of Vancouver Island last fall. Not only did the fish die, but investigation revealed that the spawn of herring attached to kelp at a depth of 10 ft. had also died. This development will affect the herring catch three years from now. Tests have revealed no organic disease among herring. But there is a possibility, say old fishermen, that the dropping of depth charges by warships during recent maneuvers affected the fish. Although the swim bladder of the herring was found to be undamaged, the "shell shock" theory is not discounted by fishery experts. (165)

New Method Devised To Test Paint

Recent laboratory experiments show that quick estimates of the corrosion behavior of painted surfaces on iron and steel can be obtained electrochemically. It is reported that corrosion of metal results, in the presence of moisture, from electrochemical action between small adjacent surfaces. Potential differences are set up between these areas, and the potential of the whole surface is the resultant of that of all of the small areas involved. This quantity can be measured readily with reference to a standard electrode. The potentials change as the corrosive action progresses. Experiments have shown that the extent of corrosion can be determined by continuously recording the potential of the metal. (166)

Nation-Wide Inventory of Canned Foods

A nation-wide survey of supplies of canned foods was taken on May 29 by the Department of Commerce. The inventory will provide for the first time complete current information on total and regional supplies of processed foods. The survey included 2,500 canners and 15,000 wholesalers, warehouses of food chains and other wholesale distributors of canned foods. (167)

Apple Growers Enthusiastic Over Dinitro Insecticides

Apple growers have become enthusiastic over the desirable qualities of dinitro insecticides for bud moth, aphids and other insects and have pushed experimenters into giving tentative recommendations after a few seasons testing.

There is a considerable variation in weather over a period of years, and as a result, mixtures that are safe for apple buds under normal climatic conditions may cause injury when trees are affected by drought during the year preceding the application. Modifications of mixtures are necessary as tests are continued.

The standard mixtures recommended in New York for bud moth, rosy aphid, San Jose scale and European red mite contain 3 gallons of lubricating oil and 12 ounces of dinitro-o-cresol, commonly called "cresol", in 100 gallons of water, applied before the buds break. Under certain conditions, however, this mixture may injure the lateral buds and several alternatives are suggested to meet seasonal conditions and for different spray combinations. (168)

Chemical Composition of Oil Sprays Affect Efficiency

Oils have been used in dormant and semi-dormant sprays for years to control pests that overwinter on orchard trees. Present type spray oils are light-grade industrial oils of the general lubricating fraction. They have a viscosity rating of about 100 second Saybolt at 100 degrees Fahrenheit.

It has been assumed generally that oils of the same viscosity are equally effective in insect control. The contrary is shown in recently completed tests. Of 40 100-second oils tested in the laboratory, it was found that there was a graduation in efficiency in the size of the dosage required to kill fruit tree leaf-roller eggs. The variation from the best to the poorest was over 400%.

It was found that leaf-roller eggs can be killed with sprays having an oil content as low as 2% when using certain products, but to secure the same results with other oils it was necessary to increase the concentration to 6, 7, or even 8%.

The explanation was found in variations in the chemical compositions of the oils. (169)

Germ-Killing Lamps

Americans in 1941 consumed more than 120,000,000 pounds of beef made extra tender with the aid of invisible ultraviolet rays generated by germ-killing lamps. These lamps enable packers to use higher temperature and humidity to speed up tenderization without danger of bacteria and mold growth which would ordinarily spoil the meat. (170)

Technical Topics

MENTHOL, used in pharmaceuticals and cigarettes, formerly made from Japanese peppermint and later synthetically from Java citronella, will now be made in the U. S. by a new process starting with coal tar. (172)

SODIUM LACTATE is being used in some food and pharmaceutical processes to replace glycerine, a vital lend-lease chemical. (173)

JAPANESE BEETLE—The grubs of Japanese beetles have been found to succumb to an infectious disease known as "milky disease". Soil infected with this disease in areas which are heavily infested with Japanese beetles is helping to kill off the pest. (174)

LEVULINIC ACID, long a laboratory curiosity, now can be made available commercially by a new process using corn starch. Non toxic, it retards the growth of bacteria and fungi. Already important in pharmaceuticals, it has useful properties in food processing and is a powerful plant growth stimulant. (175)

HYDROGENATED COTTON SEED OIL flakes are used to fortify butter in order to raise its melting point. The result is a butter which resists melting at high temperatures. (176)

GUAVA—Recommended diet for soldiers in Libya is guava, a potent source of Vitamin C. The dried fruit is used. (177)

A NEW SOLVENT—Liquid sulphur dioxide may be a step in new compounds very useful in the preparation of insecticides and other poisons. (178)

SAWDUST has increasing value as an industrial raw material. Oxalic acid, acetic acid, formic acid and methanol can be processed from it. (179)

. . .

Every effort will be made to furnish additional information on these articles. Where such information is not obtainable, we will refer inquirers to the original source of the article. Write to National Can Corp., 110 E. 42nd Street, New York City. Please mention the number at end of article—also name of the magazine you saw it in.

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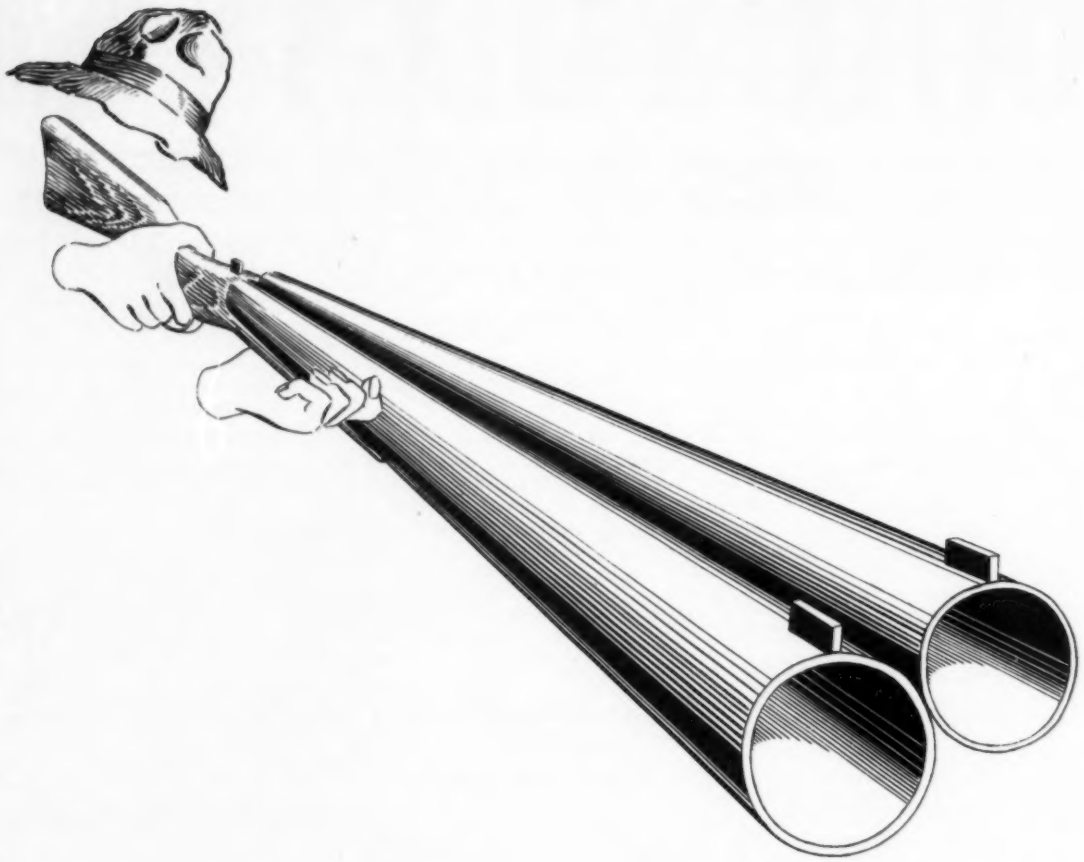

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It is easy to prove this because:—

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It works out this way:—

(1) 1 gal. of Double Strength PYRIN plus 39 of diluent make 40 of AA spray.

(2) 1 gal. of No. 40 Pyrethrum Extract plus 24 of diluent make 25 of AA spray.

(3) 2 gals. of No. 20 Pyrethrum Extract plus 23 of diluent make 25 of AA spray.

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Good News *for Ernie Pyle!*

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"About the Bug, Worm and Insect Situation..."

AS THE marines would say, "The situation is under control" because the farmers of Kenya, British East Africa, are providing an ever-increasing supply of highest grade pyrethrum, known as KEN-YA-PYE, to replace low grade Japanese flowers. Ships coming home from the Middle East bring available Kenya pyrethrum under Government priorities which is being used by insecticide manufacturers to make better pyrethrum insecticides.

In the half year from October 1941 to April 1942 Kenya delivered one of the largest quantities of pyrethrum ever brought into the United States in an equal period. Importations during the second half of 1942 are expected to be sufficient to supply the growing requirements of the Army and Navy, the needs under the lease-lend agreement with our Allies, and leave enough for commercial purposes.

And that's good news about the "bug, worm and insect situation" on the farm, in the garden and in the home.

Please convey our compliments to Major Bateson.

Dear Ernie Pyle:

In your interesting column of March 23rd, you reported, "Major Bateson says another great peril to our market basket is going to be the lack of insecticides. He can visualize the garden bugs eating us up.

"For he says the base of most insecticides is a plant called perytheum, which is raised mostly in Japan. He says he tried for years to get American manufacturers to buy it from American growers in order to encourage growth here. But they already had their contracts with Japan, so nothing came of it. And now we have practically no perytheum.

"He doesn't know what we're going to do about the bug, worm and insect situation."

Very truly yours,

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Until the Army's requirements for malaria control are met, there will be little or no pyrethrum insecticide available for other uses.

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Our youth has found romance and pledged loyalty in the mists of Niagara. Our industry has found power in its cataracts to drive its great dynamos. And the very fact that its power and beauty are shared in peace and friendship with a neighbor country has made it a shrine of good will at which people the world over may take heart. Surely, these great Falls give voice to all that America is fighting for today—the permanent, steadfast, dynamic way of life that can be directed to the good of all but never tamed to slavery.

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Worth looking into!

Here's a picture well worth looking into...one that helps conserve substantial quantities of steel, tin, tinplate and rubber, puts your product in a patriotic package. It's a picture many leading insecticide manufacturers have found ideally suited to their requirements.

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Anchor Hocking Containers and Closures

Here, in pint and quart sizes, are two of the 23 Anchor Hocking Narrow Mouth Rounds which are excellent for all liquids and household chemicals. They're easy to dispense from, make it possible to see quantity at all times. Complete size range runs from ½ oz. to 160 ozs. Available in amber or crystal.

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The resultant volume of demand would have been difficult to cope with under any conditions and impossible under present handicaps. We can only express our sincere regret at our inability to accept all orders and our hope that we can accept a larger proportion soon.

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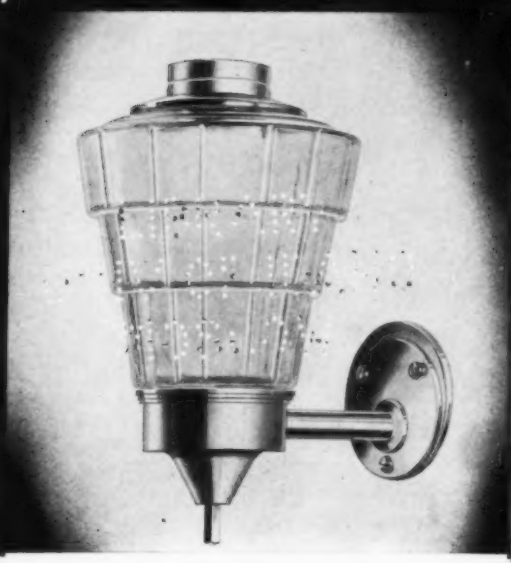

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LIQUID SOAP DISPENSER

. . . and we nearly forgot to mention Moderne's important purse appeal.

The Moderne is merely one model in the complete precision line.

NOTE: Ask about our new service that will boost your dispenser sales way up.

LIST OF PRODUCTS

LIQUID SOAP DISPENSERS
LIQUID SOAPS AND BASES
OILS SOAPS AND LIQUIDS
DISINFECTANTS
INSECTICIDES
WAXES AND POLISHES
DEODORIZING BLOCKS
CONTAINERS AND ALLIED PRODUCTS

AMPION CORPORATION
4-88 FORTY SEVENTH AVE.
LONG ISLAND CITY, N. Y.

BAIRDS

COAL TAR MOSQUITO LARVAECIDE

Highly Concentrated

BAIRD'S MOSQUITO LARVAECIDE positively kills all larvae (Culex) in less than two hours when diluted 20,000 parts water to one of Larvaecide.

BAIRD'S MOSQUITO LARVAECIDE kills all larvae (Culex) in less than twenty hours when diluted 40,000 parts water to one of Larvaecide.

Inert Ingredients: Water, less than 10%

A PREPARATION FOR THE EXTERMINATION OF MOSQUITO EGGS AND LARVAE FOR USE IN STAGNATED WATERS, POOLS, DRAINAGE DITCHES, CISTERNS, RAIN BARRELS, SPOUTING AND GUTTERING AND SIMILAR MOSQUITO BREEDING PLACES.

BAIRD'S MOSQUITO LARVAECIDE IS EMULSIFIABLE AND GOES INTO COMPLETE SOLUTION IN ANY PROPORTION WITH WATER AND CONTINUES TO BE EFFECTIVE AS A LARVAECIDE AS LONG AS IT REMAINS IN ANY WATERS TREATED.

BAIRD'S MOSQUITO LARVAECIDE

IS

ECONOMICAL
HARMLESS TO MAN OR ANIMALS
MORE EFFECTIVE THAN SURFACE TREATMENTS
NOT AFFECTED BY WIND OR RAIN
NON-EXPLOSIVE, NON-INFLAMMABLE

BAIRD'S MOSQUITO LARVAECIDE is absolutely harmless to vegetation when used in dilution of either 20,000 or 40,000 to one.

BAIRD'S MOSQUITO LARVAECIDE will not harm livestock drinking from treated ponds or pools in either dilutions stated.

BAIRD'S MOSQUITO LARVAECIDE is easily applied. It may be sprayed upon the surface of the water, or allowed to trickle from the spigot of a keg or can. Upon coming into contact with the water it immediately emulsifies, or forms a milky solution which penetrates to the bottom of the water, killing the wigglers throughout the body of the water as well as in the soft mud beneath. Water so treated is not injurious to cattle drinking it.

RID YOUR COMMUNITY OF THIS NOXIOUS PEST OF MANKIND

• • • • •

TO THE WHOLESALE TRADE ONLY

BAIRD & McGUIRE, Inc.

HOLBROOK, MASS. **ST. LOUIS, MO.**

SANITARY PRODUCTS

Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

DURING the past month, stocks of pyrethrum flowers and other pyrethrum products in first hands were frozen by W. P. B. order, preparatory to determination of the needs of the armed forces and subsequent allocation. This order has not interfered with manufacturers of finished insecticides continuing to do business as usual except that they have been unable to obtain any additional stocks of pyrethrum raw materials from the pyrethrum houses. In a few isolated cases, releases have been issued by the W.P.B. permitting the pyrethrum houses to ship certain specialties, but for all practical purposes, pyrethrum in first hands has been frozen.

What will be the effect of pyrethrum allocation? The answer to this depends on how much pyrethrum the Army, Navy and other war demands will require,—and on how much and when flowers are shipped from Kenya. No flowers were received in the U. S. from Kenya during May or June, although shipments are expected to arrive in July and August. Present stocks of flowers in the U. S. approximate three million pounds, but stocks of concentrate and finished insecticides in the channels of the industry are believed to be fairly heavy and adequate to take care of industrial and household needs for some time unless unforeseen circumstances arise.

Upon how much pyrethrum is taken by the Army and Navy will depend what will be left for agricultural, industrial and civilian uses. If agriculture cannot obtain what it needs in arsenicals, rotenone, and other insecticides, it will, after the armed forces, have first call on such pyrethrum as may remain available. The manufacturer of household type insect sprays may find that no more pyrethrum will be available for his needs and is likely to be forced to place a greater dependence on the synthetic materials. Judging from the demand for synthetic materials since the pyrethrum freeze order, insecticide manufacturers recognize this and have acted accordingly.

The agricultural demand for pyrethrum is somewhat of an unknown quantity. Except against a certain few insects, growers would prefer to use something else owing to the cost and other factors involved in the use of pyrethrum. The demand from the armed forces, we have heard, may not be as great as some rumors might indicate, especially if the industry's urgent pleas can persuade the Army and Navy to quit wasting critical insecticide materials and to base their requirements on sound scientific facts instead of "dream" specifications.

That Kenya will do its utmost to ship all the pyrethrum possible over the last half of this year is apparent, and if the military situation in the East African and Atlantic zones does not become too bad, we believe that a sizable increase in tonnage may reach the U. S. In the meantime, insecticide manufacturers can only await developments with crossed fingers and not too much optimism. If we may hazard a final guess, it is that manufacturers of household sprays are going to get no further supplies of pyrethrum this year.

Insecticide-Disinfectant Assn.

Hears advice from W. P. B. to form Industry Advisory Committee . . . Knapp outlines how steel containers must be restricted . . . New insecticides needed, says Dr. Dunn* . . . Must keep informed on insect-borne diseases, says Maj. Connolly . . . Fuller outlines public health policy* . . . Hold symposiums on raw materials and containers . . . Meet December in N. Y.

THE insecticide and disinfectant industry has been given the governmental go-ahead signal sanctioning formation of an all-industry advisory committee to cooperate with the War Production Board on industry problems. At the 28th mid-year meeting of the National Association of Insecticide & Disinfectant Manufacturers at the Edgewater Beach Hotel, Chicago, June 8 and 9, Melvin Goldberg, of WPB's Chemicals and Allied Products section, officially offered the suggestion. He was promptly assured by John N. Curtlett, president of the N.A.I.D.M. that action would be taken immediately.

Washington rules, Mr. Goldberg said, oppose formation of industry advisory committees unless there are immediate problems requiring discussion with the WPB. The need for control over pyrethrum stocks and container problems, among others, he declared, seem to warrant the suggested organization at this time. He recommended a small committee, whose members should be executive heads of their respective companies, with evidence to establish that they are qualified to represent all points of view both in and out of the association.

"Whether you believe it or not," said Mr. Goldberg, "there's a reason for everything done down in Washington. Only the direst military necessities determine what we do to you. In the final analysis, it's up to you, not the board. Your problems can be solved more easily and quickly, if you can express your industry's viewpoints through a responsible advisory committee."

Members and guests registered for the two-day Chicago conference totaled 225. Predominating through all discussions was the theme of the war's effects on the industry and how members can best cooperate in the national war effort. This trend was climaxed by resolutions endorsed in the closing hour, which offered the services of the association's scientific and other standing committees and the organization's statistical resources to the government for dealing with any problems pertaining to inseecticide and disinfectant matters.

Discussion of the association's scientific research program was held to a minimum. Brief progress reports were submitted by Dr. A. Edison Badertscher of McCormick & Co., Baltimore, and Dr. Emil Klarmann of Lehn & Fink, Inc., Bloomfield, N. J., on recent work of the Insecticide and Disinfectant Scientific Committees, respectively.

C. S. Kimball, of Foster D. Snell, Inc., New York, reported on investigations into "Shelf Stability of Floor Wax Emulsions." The method of accelerated aging employed in his research, he said, seemed to be satisfactory and led to one tentative conclusion; namely, that "Any wax dispersion which will not stand up seven to eight days at 125° F. is likely to become jell after six months under normal conditions of storage."

The feminine interest in the industry's products was presented in sprightly manner by Mrs. Ruth Crowley, woman's page columnist of *The Chicago Sun*. In addition to "our good friend, soap," Mrs. Crowley said, housewives want: (1) "A dependable disinfectant that is reasonably safe in a household where children are present and whose odor is not objectionable; (2) an insecticide for moths, flies, mosquitoes and other household pests which is also not dangerous in the home and whose odor is not offensive; and (3) a dependable, safe antiseptic whose use may be specific or general."

Dr. John E. Dunn of the U. S. Public Health Service, in discussing "The Use of Insecticides and Disinfectants in Our War Program," surveyed various substances employed, appraised their merits and faults and problems which their use presents to the physician, and considered, also, some of the potential effects anticipated from the increasing use of synthetic insecticides and fungicides.

"There is great need for discovery and synthesis of new insecticides and fungicides, at the present time," said Dr. Dunn, "not only to replace some of the sources of natural products lost because of the war, but to provide better products than some now in use. Food is vital to the prosecution of the war and we can little afford to share it with our insect pests.

"The war has brought new problems in combatting insects that cause or transmit disease. Our troops

*The full text of the addresses of Dr. Dunn, Mr. Fuller and others not given in this issue, will be published next month.

Discusses War Problems

must be kept free of parasites, if they are to function most efficiently. While we do have effective means for combatting most of the insects, there is ample room for improvement in development of such agents as insect repellants, fumigants, anti-scabetic preparations, larvacides, etc.

"Large groups of our civilian population have been disrupted because of the war and development of war industries. They, too, must be kept free of disease carrying insects if they are to maintain their full strength for production of weapons of war. But, in producing these new synthetic insecticides, the chemist must ever bear in mind the fact that they must not be toxic to human beings."

Major Joel I. Connolly, assistant to the president of the Chicago Health Department, in discussing war's effect on public health, declared that sanitary protection for no one part of the population can be neglected if the rest are to be made safe. The insecticide and disinfectant industry occupies a strategic position in keeping factory workers safe for the men behind the guns, he said. If air raid shelters become necessary, he added, another heavy burden will fall on the industry and he also speculated on possibilities "if saboteurs should let loose lice or fleas infested with fatal insect-borne diseases."

Among concrete suggestions offered, Major Connolly proposed that the association consider supplying to its members up-to-the minute information regarding the prevalence of diseases and new discoveries as to how they are transmitted, as well as new methods for combatting them. The recent discovery that infantile paralysis may be transmitted by house flies was cited as an instance of how insecticide manufacturers might benefit, if they make this fact known to their communities.

Radio programs of civilian defense authorities, he also said, offer an excellent medium for educating the public on health problems involving use of insecticides and disinfectants. He suggested that association members tender their services to the Office of Civilian Defense in preparing such programs.

H. C. Fuller, Washington, D. C., technical consultant of N.A.I.D.M., offered three points for consideration in formulating a public health policy, these being as follows:

(1) "Under the present emergency no factor should be ignored that will aid in maintaining the poise of the civilian population and preserving public health.

(2) "Adequate provision should be made to control bacterial and insect life liable to affect our armed forces at home and abroad and those of belligerent nations that may be harbored in our territories.

(3) "Officials in high places in government should realize that there is a public health problem confronting our population; have a sympathetic understanding of the situation and see that there is comprehensive cooperation with those endeavoring to provide adequate supplies of insecticides and disinfectants for the welfare of our forces and the population as a whole."

OPENING Tuesday morning's session, J. L. Brenn of Huntington Laboratories, Inc., Huntington, Ind., presented the report of the Priorities Committee, of which he is chairman. Washington, said Mr. Brenn, "is trying to keep us in business. But the fellows down there are just men like you and me and they can make mistakes. As the situation continues, each of us should examine our own business and see how we must do without priorities aid. Don't run to Washington each time the baby has the colic, for that complicates the situation. Go there only when you have to and then only with industry-wide problems. Remember the war comes first and we civilians are second."

In the ensuing symposium of "Raw Materials," the situation on pyrethrum and rotenone was analyzed and appraised by Dr. Alfred Weed of John Powell & Co., New York. Similar consideration was given to coal tar raw materials by J. H. Carpenter, Koppers Co.; to pine oil by Frank Rapp, Hercules Powder Co.; and to synthetic toxics for insect sprays by Ira P. MacNair of MacNair Dorland Co.

A second symposium on "Containers" was conducted by four other authorities, as follows: Cans, Roger V. Wilson, Continental Can Co.; Drums, Gordon D. Zuck, Wilson & Bennett Mfg. Co.; Bottles and Closures, Dr. Julian H. Toulouse, War Production

N.A.I.D.M. MEETS DEC. 7-8

THE National Association of Insecticide & Disinfectant Manufacturers will hold its 29th annual meeting at the Roosevelt Hotel, New York, on Monday and Tuesday, December 7 and 8, 1942, according to H. W. Hamilton, Koppers Company, secretary of the Association. The annual meeting of the Board of Governors will be held Sunday evening, December 6, preceding the regular meeting. Details of the proposed meeting will be published at a later date.

N.A.I.D.M. DEFENSE EMERGENCY SPECIFICATION "A" FOR PHENOLIC DISINFECTANT EMULSIFYING TYPE

Purpose

1. The purpose of this defense emergency specification is to provide a minimum specification for quality, as a basis for understanding and voluntary guarantees between producers, distributors, and users in the purchase of the commodities covered by these specifications, and as a foundation for confidence on the part of purchasers that the efficacy of the material is that which may be expected of phenolic disinfectant (emulsifying type), manufactured in conformity with a recognized specification of a national trade association.

Scope

2. This specification covers materials, physical and chemical properties, and certification of quality of phenolic disinfectant (emulsifying type).

Detail Requirements

3. The disinfectant shall not contain kerosene or any petroleum distillate other than phenols of petroleum origin.

4. The phenol coefficient shall be determined by the Food and Drug Administration method, using B. typhosus as test organism, and shall be clearly stated on the label attached to each shipping container.

5. The disinfectant shall make milky emulsions with water of zero hardness at 20° C. (68° F.) when diluted in the ratio of 5 parts of disinfectant to 95 parts of water for disinfectants having phenol coefficients of 10 or under; and in the ratio of 2 parts of disinfectant to 98 parts of water for disinfectants having phenol coefficients of over 10. These emulsions shall show not more than a trace of oily float or sediment when stored for 5 hours at room temperature.

6. The disinfectant shall remain limpid, showing no sign of naphthalene crystallization down to 0° C. in 3 hours.

7. The disinfectant shall contain less than 5 per cent of benzophenol (phenol, C_6H_5OH).

8. The disinfectant, under normal and reasonable conditions of storage, shall remain stable and show no loss of germicidal value.

Certification and Labeling

9. The following form of statement on labels*, invoices, etc., is recommended: The ..... Company certifies this phenolic disinfectant (emulsifying type) to conform to all requirements of a specification adopted and recorded as N.A.I.D.M. Defense Emergency Disinfectant Specification "A" by the National Association of Insecticide and Disinfectant Manufacturers, Inc.

*When used on labels, this statement is in addition to, and not in lieu of, the ingredient statement required by the Insecticide Act of 1910.

N.A.I.D.M. DEFENSE EMERGENCY SPECIFICATION "B" FOR PHENOLIC DISINFECTANT SOLUBLE TYPE

Purpose

1. The purpose of this defense emergency specification is to provide a minimum specification for quality, as a basis for understanding and voluntary guarantees between producers, distributors, and users in the purchase of the commodities covered by these specifications, and as a foundation for confidence on the part of purchasers that the efficacy of the material is that which may be expected of phenolic disinfectant (soluble type), manufactured in conformity with a recognized specification of a national trade association.

Scope

2. This specification covers materials, physical and chemical properties and certification of quality of phenolic disinfectant, soluble type.

General Requirements

3. The disinfectant shall be made from phenols of coal tar or petroleum origin and a dissolving agent.

4. The disinfectant shall not contain kerosene or any petroleum distillates other than phenols of petroleum origin.

5. The phenol coefficient shall be determined by the Food and Drug Administration method, using B. typhosus as test organism, and shall be clearly stated on the label attached to each shipping container.

6. The disinfectant shall make either a clear or opalescent mixture with distilled water at 20° C. (68° F.) within the concentration range of 1 to 4 per cent; when opalescent, it shall become practically clear upon addition of a few drops of a 10 per cent KOH solution.

7. It shall show no soap separation when cooled down to 0° C. and held at this temperature for 3 hours.

Certification and Labeling

8. The following form of statement on labels*, invoices, etc., is recommended: The ..... Company certifies this phenolic disinfectant (soluble type) to conform to all requirements of a specification adopted and recorded as N.A.I.D.M. Defense Emergency Disinfectant Specification "B" by the National Association of Insecticide and Disinfectant Manufacturers, Inc.

*When used on labels, this statement is in addition to, and not in lieu of, the ingredient statement required by the Insecticide Act of 1910.

The new disinfectant specifications adopted at the Chicago meeting are not intended to replace existing National Bureau of Standard Specifications. They are to serve as interim association specifications, lending status to the marketing of "non-specification" disinfectants during the war emergency.

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Board; Steel Containers, Donald C. Knapp, War Production Board.

The tin can situation, Mr. Wilson said, is "black, very black." Adequate supplies of suitable enamels have been made available for use in disinfectant containers and, while "not sure," can makers think the new containers will be satisfactory.

Steel drums, Mr. Zuck stated, are completely controlled and restricted. To get any, he said, the essentiality of the product concerned must first be established and then the absolute need for steel in which to package it must be proven. A new lacquer for lining containers may eliminate need for galvanized or tin containers, he thought. Many users, he said, have found the new enameled containers actually better than galvanized iron or tin and use of this new type containers is being extended daily to new products. He quoted one government official as saying that after the war, when zinc and tin are again readily available, they will rarely be used and he suggested that now is a good time to investigate the possibilities of the lacquer lined containers.

Dr. Toulouse, speaking on bottles and closures, said that as yet the glass industry has not been pushed to capacity, but that when more items come into glass this situation may change. The present objective, he stated, is to permit no further expansion in the glass industry, but to try to do the job with what machinery is now available. A standardization and simplification program, which he outlined, will, he thought, accomplish the ends sought. Designs will favor short bottles and round shapes, but private molds will not be ruled out, if they are as economical to make as stock designs.

Specifications "A" and "B" are modifications of CS70 and CS71 respectively, eliminating some of the requirements made difficult of attainment on account of raw material shortages. Specifications "C" and "D" are new in character, — the former covering disinfectants from synthetic phenols and the latter fortified phenolic disinfectants.

Donald C. Knapp, of WPB, who discussed the steel container situation, suggested immediate substitution of wood, glass or fiber containers for steel. The problem, he declared, is "deadly serious" and he asked for immediate action. Even the army has to prove that it must have steel containers, he said, and he admitted that for gases and other products which must stand the rigors of a military campaign, no other material is superior to steel; also that steel is essential for some civilian products as well. "But don't be wishful thinkers," he warned. "Start now using substitutes along with what steel you have. Then, when the metal is completely restricted, you will not be so severely affected."

He described a new fiber drum now available which has been found suitable for dry chemicals and pastes. Commenting on the futility of hoarding, he said that if limitation orders are issued, excessive stocks would be re-distributed to companies which must have them. "The surest way to run your own business," said Mr. Knapp, "depends on how much you do for yourselves. The less you do, the more you will be told to do. The WPB does not want to run you and your industry advisory committee must present your case with great detail."

In a move to adjust the industry's product standards to the changed conditions of war time operation, Dr. E. G. Klarmann, chairman of the Commercial Standards Committee, offered the meeting four proposed phenolic disinfectant specifications for use during the emergency. The first two of these specifications, modifications of CS70 and CS71 (See association bulletin No. 31, March

N.A.I.D.M. SPECIFICATION "C" FOR PHENOLIC DISINFECTANT FROM SYNTHETIC PHENOLS

Purpose

1. The purpose of this commercial standard is to provide a minimum specification for quality, as a basis for understanding and voluntary guarantees between producers, distributors, and users in the purchase of the commodity covered by these specifications, and as a foundation for confidence on the part of purchasers that the efficacy of the material is that which may be expected of phenol disinfectant from synthetic phenols, manufactured in conformity with a recognized specification of a national trade association.

Scope

2. This specification covers materials, physical and chemical properties and certification of quality of phenolic disinfectants of synthetic origin.

Detail Requirements

3. The disinfectant shall be made from synthetic phenols of the type comprising alkyl, aryl, and aralkyl phenols, or their chlorinated or brominated derivatives, and a dissolving or emulsifying agent.

4. The phenol coefficient shall be determined by the Food and Drug Administration method, using B. typhosus as the test organism, and shall be clearly stated on the label attached to each shipping container.

5. The disinfectant, under normal and reasonable conditions or storage, shall remain stable and show no loss of germicidal value.

6. The disinfectant shall make stable emulsions or solutions with water of zero hardness at 20° C. (68° F.); they shall show not more than a trace of float or sediment when stored for 5 hours at room temperature.

Certification and Labeling

7. The following form of statement on labels*, invoices, etc., is recommended:
The ..... Company certifies this phenolic disinfectant from synthetic phenols to conform to all requirements of a specification adopted and recorded as N.A.I.D.M. Specification "C" by the National Association of Insecticide and Disinfectant Manufacturers, Inc.

*When used on labels, this statement is in addition to, and not in lieu of, the ingredient statement required by the Insecticide Act of 1910.

N.A.I.D.M. SPECIFICATION "D" FOR FORTIFIED PHENOLIC DISINFECTANT

Purpose

1. The purpose of this commercial standard is to provide a minimum specification for quality, as a basis for understanding and voluntary guarantees between producers, distributors, and users in the purchase of the commodities covered by these specifications, and as a foundation for confidence on the part of purchasers that the efficacy of the material is that which may be expected of a fortified phenolic disinfectant manufactured in conformity with a recognized specification of a national trade association.

Scope

2. This standard covers materials, physical and chemical properties, and certification of quality of fortified phenolic disinfectant of both the emulsifying and soluble types.

Detail Requirements

3. The disinfectant shall be made from phenols of coal tar or petroleum origin, plus synthetic phenols of the class comprising alkyl, aryl or aralkyl phenols or their chlorinated or brominated derivatives, and a dissolving agent.

4. The proportion of the synthetic phenol shall be not more than 25 per cent by weight of the total phenolic content.

5. The disinfectant shall not contain kerosene or any petroleum distillates other than phenols of petroleum origin.

6. The phenol coefficient shall be determined by the Food and Drug Administration method, using B. typhosus as test organism, and shall be clearly stated on the label attached to each shipping container.

7. The disinfectant, under normal and reasonable conditions or storage, shall remain stable and show no loss of germicidal value.

8. The disinfectant shall make stable emulsions or solutions with water of zero hardness at 20° C. (68° F.); they shall show not more than a trace of float or sediment when stored for 5 hours at room temperature.

Certification and Labeling

9. The following form of statement on labels*, invoices, etc., is recommended:
The ..... Company certifies this fortified phenolic disinfectant to conform to all requirements of a specification adopted and recorded as N.A.I.D.M. Disinfectant Specification "D," by the National Association of Insecticide and Disinfectant Manufacturers, Inc.

*When used on labels, this statement is in addition to, and not in lieu of, the ingredient statement required by the Insecticide Act of 1910.

16, 1942) were designed to take care of the existing shortages of raw materials for phenolic disinfectants of both the emulsifying and soluble types, by eliminating the requirements as to minimum content of active ingredients and the maximum of water. The other two specifications are completely new, one covering disinfectants from synthetic phenols, and the other fortified phenolic disinfectants. The association membership, by vote from the floor, approved the adoption of the new specifications for the duration of the war emergency.

Dr. Paul Poirot of the Office of Price Administration, explained the government's price ceiling policies. Price fixing, he stated, is not intended to eliminate profits but to control inflation during and after the war. For this, cooperation of manufacturer, wholesaler and retailer is required and even then, "OPA may have to explain and point out possibilities the industry has overlooked." Stabilization of the cost of living, he held, is a worthy goal and price control is a means to that end. To succeed, everyone must believe in the program.

George M. Jackson, assistant to the Director, Interstate Commerce Commission, surveyed the transportation situation, so far as the railroads are involved and explained powers of the ICC to meet emergencies. The rails, he declared, are making highly efficient use of equipment available and breakdown in transportation facilities has, thus far, been averted. Car delays and detention of equipment by shippers, however, is bothersome. He suggested that manufacturers employ loading and unloading crews 24 hours a day, seven days a week and adopt other conservation measures so that all cars can be promptly returned to service for maximum utilization.

Guy E. Reed, vice president of Harris Trust and Savings Bank, Chicago, received close attention as he analyzed the government debt, the price ceiling policy and other factors in the financial situation and considered post war prospects for business stability. He predicted that this nation will finance and finish the war with a reasonably balanced economy. Following the war, he thought, will come a period of "rather unusual prosperity." World order after the war, he asserted, will be as important as stability of our own economy and this will offer a grand opportunity for America to lead the world in a compassionate and human policy.

Donald McGibney, noted CBS radio news commentator, provided an interlude in the program, with a 45-minute discussion of the war situation and the showing of a film, sponsored by Standard Oil Co. of Ohio, which portrayed the army training program.

President John N. Curlett's opening address and the report of secretary H. W. Hamilton were carried in the June issue of *Soap and Sanitary Products*. Association vice president Henry A. Nelson of Chemical Supply Co., Cleveland, reporting as chairman of the Membership Committee, announced that the following firms became new members of the association during the past year: Ampion Corp., Long Island City, N. Y.; Crown Can Co., Philadelphia; Hunt Mfg. Co., Cleveland; Orbis Products Corp., New York; Franklin Research Corp., Philadelphia; Worrell Mfg. Co., St. Louis; Puritan Chemical Co., Atlanta; Wm. Cooper & Nephews, Chicago; Grand Rapids Chemical Co., Grand Rapids, Mich. Fred A. Hoyt, Atlanta, Ga., was elected an honorary member.

W. J. Zick, of Stanco, Inc., New York, past president of the association and chairman of a special committee, submitted a report endorsed by the Board of Governors, which proposed to raise membership dues as follows: Active from $75 to $100; associate from $50 to $75. Recognizing the need for increased funds to meet demands for the association's service, a motion to accept the report was approved by the members.

The Resolutions Committee, with C. W. Furst of Furst-McNess Co., Freeport, Ill., as chairman, included the following as members: Harold King, R. J. Prentiss & Co.; Marshall Magee, T. F. Washburn Co., Chicago; Melvin Fuld, Fuld Bros. Co., St. Louis; and W. J. Zick, Stanco, Inc., New York. The resolutions as adopted by the membership, accompany this report.

The annual meeting date was fixed for December 7 and 8, 1942, at the Roosevelt Hotel, New York.

REGISTRATION LIST

Agricultural Laboratories, Inc.—M. M. Elmers
Allaire Woodward & Co.—M. J. Reichert
American Can Co.—T. Alwyn, J. E. Baechly, C. W. Carlson, D. Craver, H. L. Sipple, H. Russell Todd
American Disinfecting Co.—Alexander Fabry
Ampion Corp.—L. B. Schwarcz
Aridor Co.—J. N. Davies
Aromatic Products, Inc.—M. Lemmermeyer, S. J. Vance
Auto Compressor Co. — Gilbert W. Wilkin
Baird & McGuire, Inc.—G. M. Baird
Baird & McGuire, Inc.—Jack Varley
Barrett-Division, Allied Chemical & Dye Corp.—Leon Miller
S. H. Bell Co.—S. H. Bell
Baldwin Laboratories—H. W. Baldwin
Breuer Electric Mfg. Co.—I. Burton, D. E. Campbell
Candy & Co.—Robert M. Lockhart
Central Can Co.—Henry Frazin
Chemical Supply Co.—Henry A. Nelson
Commerce Petroleum Co.—Dr. W. R. Husen
Continental Can Co.—L. J. LaCava, R. V. Wilson
Continental Chemical Co.—J. A. Ganger
Wm. Cooper & Nephews, Inc.—Chas. E. Timson
Crown Cork Specialty Corp.—L. R. Carvalho
Davies-Young Soap Co.—Dr. R. B. Trusler, Russell H. Young
Derris, Inc.—R. F. Joyce
Dodge & Olcott Co.—R. W. Bush, Dr. L. A. Parker, H. E. Rosensteel, L. H. Shropshire, R. B. Stoddard, Frank S. Topper
C. B. Dolge Co.—Clarence L. Weirich
Dow Chemical Co.—W. W. Allen, D. K. Ballman, Fred Fletcher, M. B. Turner
duPont Co.—Earle G. Bennett, A. H. Goddin, S. J. Hill, Jos. A. Jenemann, F. W. Wolff
Enoz Chemical Co.—Sidney J. Coyne
Federal Varnish Co.—John H. Lawson, M. J. Flanagan
Felton Chemical Co.—C. A. Hanley
Fritzsche Bros., Inc.—Joseph A. Gauer
Fuld Bros.—Melvin Fuld
Fuller, Henry C.—N. A. I. D. M. Consultant
Furst-McNess Co.—C. W. Furst, F. P. McNess
General Laboratories, Inc. — Wm. A. Hadfield
Givaudan-Delawanna, Inc.—Dudley F. Lum, M. B. Vance
Grand Rapids Chemical Corp.—Wm. J. Wagner
Gulf Oil Corp.—Wallace Thomas
Gulf Research & Develop. Co.—Dr. W. A. Simanton
B. Heller & Co.—James R. Heller
Hercules Powder Co.—G. F. Hogg, Paul Mayfield, D. E. Murphy, Geo. C. O'Brien, Frank Rapp, Walter E. Richard, Friar Thompson, Jr.

Resolutions

¶ 1) Resolved that the association place at the disposal of the various government agencies the Insecticide Scientific Committee, the Disinfectant Scientific, the Sanitary Specialties Scientific Committee, and other standing committees of this association. It is felt that this will enable the association to be of greater service to the government in the war effort in the matter of specifications, substitutes, and other problems pertaining to our industry.

Be It Further Resolved that our association office continue to cooperate with various government agencies in obtaining for them any statistical information available to it.

Be It Further Resolved that a copy of this resolution be forwarded to the various government agencies concerned with our industry.

¶ 2) Be It Resolved that the association extend greetings and good wishes to the various members of our industry now serving in the Armed Forces, and wish them Godspeed and a safe and victorious return.

¶ 3) Be It Further Resolved that the association express its appreciation of the services which many of its members are rendering the government in administrative and advisory capacities.

¶ 4) Be It Resolved that the association offer the facilities of its various committees and also speakers to the Office of Civilian Defense.

¶ 5) Be It Resolved that the association extend its sympathy and condolences to the family of Harry T. Hollingsbead, president of the Enoz Chemical Company, long active members of the association.

¶ 6) Be It Resolved that the good wishes for speedy recovery be extended to Dr. J. J. Davis, of Purdue University, and to Grant Dorland, of Soap and Sanitary Chemicals.

¶ 7) Be It Resolved that the association express its appreciation to Dr. L. A. Hawkins, formerly in charge of the Division of Control Investigations in the Bureau of Entomology and Plant Quarantine, of the Department of Agriculture, for the services he has rendered to his government and to this association.

¶ 8) Resolved that the association render its sincere thanks to our speakers: Donald McGibney, Mrs. Ruth Crowley, Dr. John E. Dunn, Major Joel I. Connolly, Dr. Alfred Weed, J. H. Carpenter, Frank Rapp, Ira P. MacNair, Roger V. Wilson, Gordon D. Zuck, Dr. Julian H. Toulouse, Donald C. Knapp, Guy E. Reed, Dr. Paul Poirot, C. S. Kimball, Melvin Goldberg, George M. Jackson, and to the Standard Oil Company of Ohio for the showing of the film, "Ohio Soldiers."

¶ 9) Resolved that the association express its appreciation to the following guests for their continued interest in our association and their valuable contribution to the success of our meetings: F. L. Campbell, A. M. W. Carter, Dr. J. E. Dunn, Irwin H. Gilbert, Melvin Goldberg, Fred L. Knowles, Dr. C. C. McDonnell, Dr. E. R. McGovran, Dr. R. C. Roark, Dr. Paul R. Poirot, Prof. Ed M. Searls.

¶ 10) Be It Resolved that the association give a vote of thanks to the Officers, Board of Governors, the Advisory Committee, the Executive Secretary, and to all of the committees who have rendered a most valuable service in the conduct of the association operations for the past six months, and who have made possible one of our most successful meetings.

Respectfully submitted by

Resolutions Committee: C. W. Furst, chairman; M. Magee, M. Fuld, H. R. King, W. J. Zick.

Dr. Hess & Clark, Inc.—D. E. Clark, H. M. Clark

J. I. Holcomb Mfg. Co.—Lawrence Newburn

Huntington Laboratories, Inc. — Earl Brenn, J. L. Brenn

Hysan Products Co.—Henry J. Brownstein

Koppers Co.—J. H. Carpenter, H. D. Cooper

Koppers Co.-White Tar Div. — H. W. Hamilton, R. C. Wickersham

Dr. L. D. LeGear Medicine Co.—J. E. LeGear

Lehn & Fink Products Corp.—Dr. E. G. Klarmann

MacNair-Dorland Co.—Ira P. MacNair, Thomas Morgan, H. H. Slawson

Magnus Mabee & Reynard, Inc.—Robert B. Magnus, T. B. Tribble

M. B. McCloud & Co. — Walter S. McCloud

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McCormick & Co.—Dr. A. Edison Badertscher, John N. Curlett, Lester W. Jones, Charles P. McCormick

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Midland Chemical Laboratories—F. H. Kretschmer, Frank A. Sass

Midway Chemical Co.—R. W. Simpson

Monsanto Chemical Co. — Arthur H. Hibbeler, E. C. Hyry, Gerald F. Pauley

Newport Industries, Inc. — Philip E. Calo, John J. Firnsch

Niagara Alkali Co.—Wm. J. Weed

Owens-Illinois Glass Co.—E. F. Bertrand, F. W. Rosenbauer

S. B. Penick & Co. — Harold Noble, Fred F. Rauch

Plunkett Chemical Co.—L. D. Benedict, Edward Salazan

John Powell & Co.—H. J. Ahles, C. G. W. Campbell, D. G. Hoyer

John Powell & Co.—D. W. Lynch, John Powell, Dr. Alfred Weed

R. J. Prentiss & Co.—A. W. Bevernick, Harold B. King

Puritan Chemical Co.—M. A. Fledman

The Puro Co., Inc.—A. L. Saeks

P. C. Reilly, Jr.—Reilly Tar & Chemical Co.

Reilly Tar & Chemical Co.—J. L. Tildsley, Jr., Francis C. Yeazel

Rex Research Corp.—Dr. O. F. Hedenburg, H. W. Moburg

Geo. B. Robbins Disinfectant Co.—Guy B. Robbins

Rochester Germicide Co.—W. B. Eddy

Rohm & Haas Co.—C. J. Dumas, A. G. Kampmeier, John H. Mueller, R. N. Lindabury, D. F. Murphy

The Selig Co.—Albert S. Selig.

Shell Oil Co.—Dr. S. C. Dorman, O. N. Fager, C. S. Harris

Shell Development Corp.—Harry Sutherland

Sinclair Refining Co.—R. M. Blickensderger, N. J. Gothard, A. G. Grady, F. O. Huckins, C. F. McGoughran

Skinner & Sherman, Inc.—Burton G. Philbrick

The T. L. Smith Co.—F. B. Peterson

Socony-Vacuum Oil Co.—A. W. Morrison, A. V. Pabst, C. E. Smith

L. Sonneborn Sons, Inc.—E. Brand, R. Sandke, R. W. Bjork, Dr. E. Meyer

Foster D. Snell, Inc.—C. S. Kimball

Stanco, Inc.—A. H. Carnes, R. B. Davies, Franklin C. Nelson, F. J. Oertel, Howard Seeland, W. J. Zick

Standard Oil Co. (Indiana)—Elmer W. Adams, C. R. Cleveland

Standard Oil Co. (Ohio)—R. O. Cowin

Standard Oil Co. (Indiana)—James A. Green

Tanglefoot Co.—F. William Hutchinson, Owen D. Mosher

United Cooperatives, Inc.—R. P. Howe, C. D. Thayer

U. S. Industrial Chemicals, Inc.—H. J. Prebluda

U. S. Sanitary Specialties Corp.—Geo. L. Simmonds

van Ameringen-Haebler, Inc. — A. J. Dedrick, S. A. DeVries, Wm. F. Sheehan

Velsicol Corp.—N. L. Mooneyham, W. E. McCauley

Vestal Chemical Co.—Wm. F. Pollnow

T. F. Washburn Co.—M. L. Magee

J R. Watkins Co.—Dr. E. G. Thomssen

West Disinfecting Co. — Donald P. Moses

Western Chemical Co.—E. F. Garvey

Whitmire Research Corp.—H. E. Whitmire

Wilson & Bennett Mfg. Co.—Gordon D. Zuck

G. H. Wood & Co., Ltd.—W. E. Vaughan, G. H. Wood

Worrell Mfg. Co. — H. A. Brereton, G. W. Deibel

Zep Mfg. Co.—Sam Zaban

Zonite Products Corp.—R. J. Hahn

GUESTS

U. S. Army, Lieut. Irwin H. Gilbert, Sanitary Corps Lab., Ft. Sheridan

(*Turn to Page* 119)

A Symposium on CONTAINERS

I.—STEEL CONTAINERS

By Donald C. Knapp

Chemical Branch, War Production Board

YOU know that I am before you today as the representative of a branch of the United States Government. That branch is charged by our President with the responsibility of showing industry how it can help win the war, and how it can help maintain a healthy civilian population at the same time. That branch is, of course, the War Production Board. I'm from the Chemicals Branch of the Board. We are concerned about containers. I want to show you why a comparatively small factor in your business may be the cause of your suspending operations. And I want to show you how you can avoid that.

Our problem of containers is the problem of steel. It is serious—deadly serious. It demands action. I am going to ask you to take action at once. I am *asking*, mind you, not *telling*. When I clear up in your minds the real function of the War Production Board, then you will see how we can help you, and you will see what you can do, and how.

When I explain to you why we face a critical shortage of steel—such a shortage that use of steel containers must be restricted—you will see the *need* for action. When I tell you that glass containers up to 5-gallon capacity, or possibly the 13-gallon carboy, may be used as a substitute, and when I tell you that tight wooden barrels may be used for a great many liquid products, and that there are merchandising opportunities, even in these substitute packages, then you will see what action you can take. When I tell you about the prospects of a Government Limitations order of steel containers, you will see what action you will *have* to take. And, when I tell you the relationship between your patriotic opportunity and this steel container situation, then you will see the action you will *want* to take!

What are the facts of our steel shortage? Lest our enemies take comfort from the fact that we haven't enough steel, let me point out that we have more steel today than ever before in the history of any country on the face of the earth. More than 85 millions of tons of it!

Steel is short, not because we are producing less, but because we are making so many of the implements of war. We are producing three tons of steel for every two the Axis can reach. But even that isn't enough.

A 100-pound aerial bomb takes about the same amount of steel as a 55-gallon drum. A 155-milimeter gun takes 26,000 pounds of steel; a medium tank, 72,000 pounds; a battleship, over 30,000 tons. To produce staggering quantities of these and other fighting tools, we are turning the heat on our whole industrial machine.

Not the least of this effort is the conservation of steel in every possible civilian activity. You men here today have a big part to play in helping to provide more steel, and even more steel, to set the Axis on its axis!

May I digress for a moment? Do you wonder, sometimes, why it is necessary for our whole lives to be squeezed dry of all the things that make it "The American Way"? Are you a little bit reluctant to cut yourselves off from almost all of the comforts and amenities of living, and of doing business?

Let me tell you a story to illustrate my point. One hundred and sixty-seven years ago there lived on the outskirts of the village of Concord, Massachusetts, a farmer. He and his wife and their three small children were hewing from a new land food and shelter. He was building his life, and his community, in a new pattern—the pattern of freedom.

This man was roused from his bed one clear April night by a lone horseman, riding furiously from Boston to Concord—riding to spread the news that the Redcoats were coming—riding to call all men to the defense of their homes and their liberties. Without hesitation, with a hurried farewell to his family, this patriot snatched his musket from the wall, ran 15 miles to join his fellow townsmen in their heroic stand against the forces of oppression. That man, gentlemen, who sprang from his home in answer to Paul Revere's alarm, never returned. His

*Problems in packages and packaging faced today by the manufacturer of insecticides, disinfectants, and other sanitation products.**

life was given to help build the freedom we enjoy today. This story is very real to me, for I came from that part of the country.

Everything we do today, tomorrow, and next month, is just as important to the future of this country as was that first battle of Concord. It may seem a far cry from a pioneer's sacrifice to steel containers, but it isn't. They upset their normal lives, did without material things, in order to win an enduring liberty. We are doing the same thing today. And we are *all* doing it.

HOW do steel containers tie into winning the battle for freedom? Our normal consumption of steel for drums and cylinders used to be about 400,000 tons a year. In 1942, however, because of the requirements of the armed forces, we will use about a million and a quarter tons.

Some commodities must be shipped in steel. No other material is suitable, for instance, for gasses under high pressure. No other material is suitable for certain other products, as you know. Many supplies for the armed forces must be packed in steel containers. A product that could be packed in a paper bag when left in a warm, dry warehouse must be shipped in steel to withstand the rigors of a military campaign. We just can't take any chances with supplies for the services. To win battles they must have supplies, in good condition, where they are needed, under the most difficult circumstances. For these two purposes, absolutely essential civilian products, and military supplies, we must continue to use steel containers.

The difference between a million and a quarter tons and the amount needed for absolute necessity is a lot of steel. We must find some way to turn these hundreds of thousands of tons of steel into making the tools of war. This is where you come in. Wherever you find a way to eliminate your use of steel containers, then you are making a direct contribution to winning the war.

Incidentally, don't think that the Army or Navy are being permitted anything like luxury in the matter of steel containers. Part of my job is to check their specifications. They have to prove that, first, they need the particular kind of metal container they have specified; and, second, that they can not do with a substitute wood, fibre, or glass container. We do plenty of whittling on the armed forces too. We've squeezed them down on many a proposition to a thinner gauge of metal. That's one way to save steel if they just simply *have* to have steel containers.

Gentlemen, you and I, today must work out between us the understanding that metals will win the war. We need more steel. Every additional ton of steel we use in your industry that can be avoided is a severe blow to our military position. Why?

Steel uses not only iron, coal, lime. It needs nickel, chromium, manganese, and scrap. It needs transportation, electric power, and manpower. Every ton of steel you turn back from civilian to war use is a whale of a big boost for the whole war machine.

The need for more steel is not a "phony." Some of you may feel that this is all just talk, that the War Production Board isn't in earnest in its determination to give more and more steel to war production. If the use of steel containers is limited, you may feel that the War Production Board will relent at the last minute to tide you over a conversion period that could be very trying to you.

I advise you not to be wishful thinkers. I can tell you, straight from the shoulder, that containers must make their contribution of steel. If steel continues to go into containers, it can expect the axe. I won't attempt to predict the future except to say that if the War Production Board does restrict use of steel containers, there will be no equivocation, no uncertainty, no last minute help. If you are not willing to prepare yourselves now for the use of substitute containers, you will just have to take limitations when they

*A series of addresses before the 28th mid-year meeting of the Natl. Assn. of Insecticide & Disinfectant Manufacturers, Chicago, June, 1942.

come. It may mean that you will have to suspend operations until you can get substitutes.

I would like to see you start now, each of you, individually. Don't wait for your competitor to lead the way. Don't get out on a limb without good supplier connections. Build up your supplies of wood, fibre, and glass containers. Use them along with your metal ones as long as you can. Then, when metal use of containers is restricted, you will be affected very little.

If you are worried about the effect of substitute containers on your competitive position, remember that he who waits may not be able to ship at all. Who is in the best competitive position then? I won't say more about the steel shortage. You know it as well as I. And I know perfectly well that you want to help meet it. Get me straight on one point. I speak for the War Production Board when I say that we do not want to put anyone out of business. We do not want to upset your business in any particular. Our job is to *keep* you in business if that is humanly possible in the face of military necessity. We want to show you how you can support the war effort and stay in business, too.

IT is clear that one way you men here today can help to win the war is to stop using steel containers wherever you can. The obvious answer to this, I should think, is to use some of the substitutes that have been developed—wood, fibre, and glass—wherever you can, and to start doing it at once.

Now I know it is difficult for you to change your point of view on the packaging matter. It is difficult to establish new thought patterns and business procedures. But it can and should be done. Some of you may think that we ask "damn-fool" questions. You should see some of the answers we get. Quite often we have to ask for additional information, such as inventory position and a statement on the reasons why substitutes for steel drums can not be used. Many times applicants do not answer this question at all. This leads me to believe that there isn't any reason why he can't use a substitute. Another answer which doesn't deserve much consideration is "none," n-o-n-e. Others that are used, more often than you might believe, include "glass will break, wood leaks, railroads won't accept any package other than steel" or that I.C.C. regulations say "liquids must be packed in steel." I have shipped thousands of glass carboys of such liquid materials as sulfuric acid by rail, and I have read the I.C.C. regulations until I am blue in the face, and I can't find any of these so-called reasons.

Check your shipping regulations carefully and if there are regulations which apply to your product, if you will give us the source of the regulation and the section number, then we will know what you are talking about.

We can not give blanket ratings for the use of metal containers. We must know each item that requires metal containers, and how many they require—the size, gauge—so that we may judge whether the material is essential, and whether it actually does require a metal container, or whether substitution is possible.

I have in my office in Washington samples of a new fibre board drum. It has a wooden top, with a steel band around the top and bottom. It is lined with an especially impregnated liner. It is water-proof, it is light, it is strong, and it is cheap. It costs less than three-quarters as much as a one-use steel drum. You may take my word for it, this new fibre drum is exceedingly attractive. Now you are faced with the decision of whether or not to use the new fibre container. You can say, "Oh, I don't know. I'm not sure it will do."

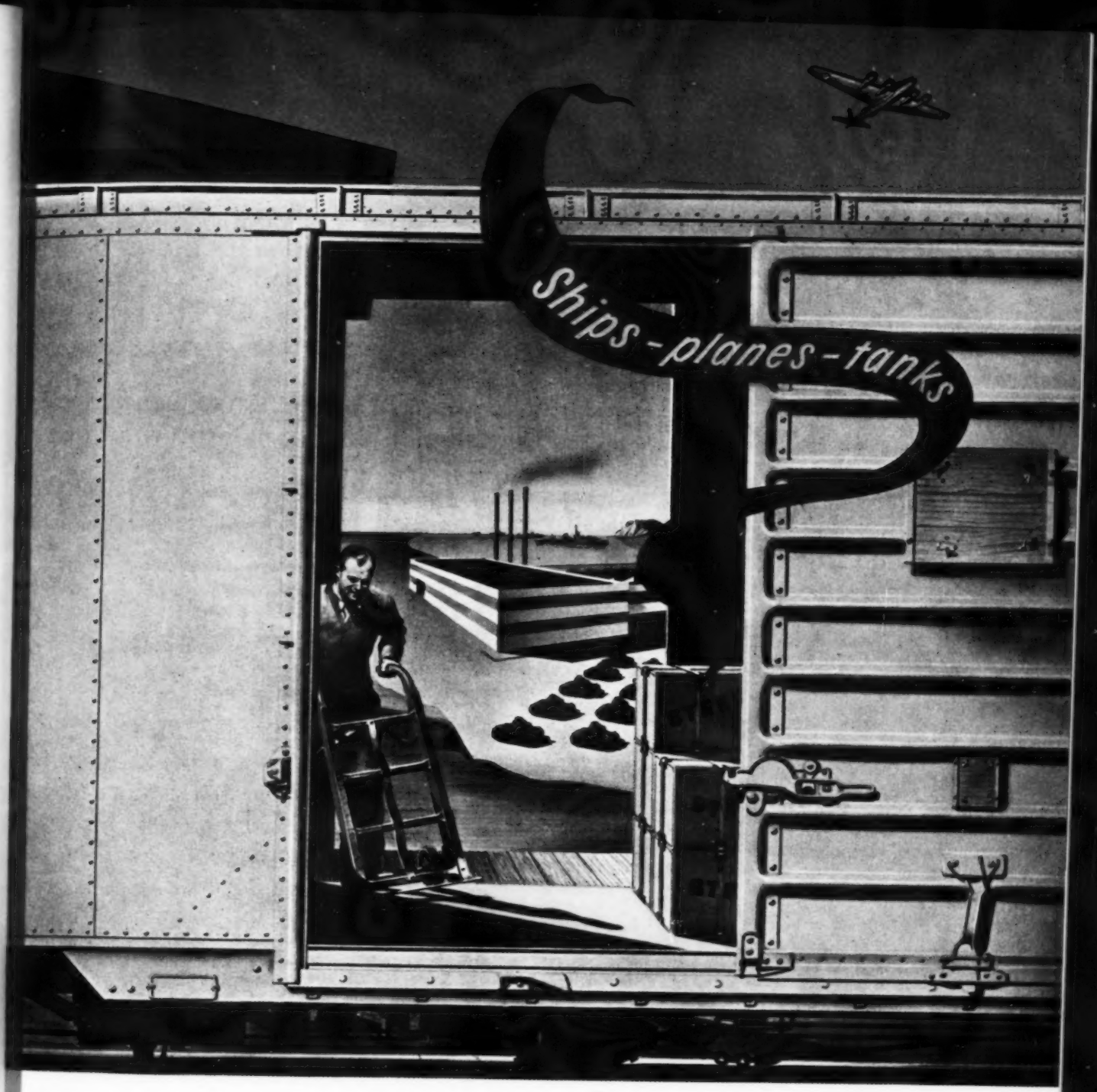
Or you can say "Here is a container that has great merchandising possibilities. It is much better looking than a steel drum, it is easy to open. It can be decorated. It is cheap; it is light; and will save freight. It is the ideal drum for any use which brings it into contact with consumers. I want to use this new drum, and by George, I'll figure out how to make it work for me." That positive approach, gentlemen, is in my opinion, the right way to do this conversion job. It all depends upon whether you want to use substitute containers or not. I don't think you should consider *not wanting* to.

And then there is tight cooperage. You know as much as I do about it. But let me tell you that you are missing a bet if you don't use kegs as a merchandising weapon. Many of them are used by the ultimate consumer. What would happen if you shipped your product in a white keg with red and blue bands? Even call it a "Victory Keg" if you like. Turn it to an advantage rather than be forced, grumbling, into using it.

Here is another reason why you shouldn't wait, but should start at once to investigate new containers. The Tight Wood Cooperage Association tells me that their industry can turn out, on a 40-hour week basis, six million more 55-gallon equivalents a year. But they can't jump into this kind of production over night. If you couldn't get any more steel, or were forbidden to use steel containers tomorrow, what would you use?

PRODUCTION of any containers, wood cooperage, glass, or fibre, must be built up gradually. Assembly lines have to be formed, labor and materials have to be arranged. If you will give the manufacturers of substitute containers some warning, if you will start to use them gradually right now, you will be assured of the containers you need to avoid suspension of operations. The same thing applies to glass. You know about glass containers. Have you exhausted the possibilities of glass as a means of helping you turn steel into war productions?

Withdrawal of steel from certain container uses brings up the possibilities of a limitation order by the War Production Board to save steel by limiting the amount of steel that can be used in containers. It is a very dangerous and uncertain thing to attempt to predict the issuance of such orders. I think I can say safely, however, that the War Production Board is thinking about issuing a Limitation Order on steel containers. When it will come, I don't know. It is my feeling that it will limit the filling, use, and shipping



Even before they're made they must travel

American planes could never hope to dominate the skies . . . American tanks could never crash their way to victory . . . American ships could never hope to succor a desperate world . . . if American *transportation* had not first done the biggest job of its kind in history.

At a time when *everything* depends upon a free flow of traffic, the American transportation system has worked so magnificently that America, like a man with a good stomach, has scarcely been aware of its existence.

Even before ships, planes, tanks and guns are made, the railroads and other means of transportation must carry the raw materials thousands of miles from a thousand suppliers to a thousand different parts of the nation.

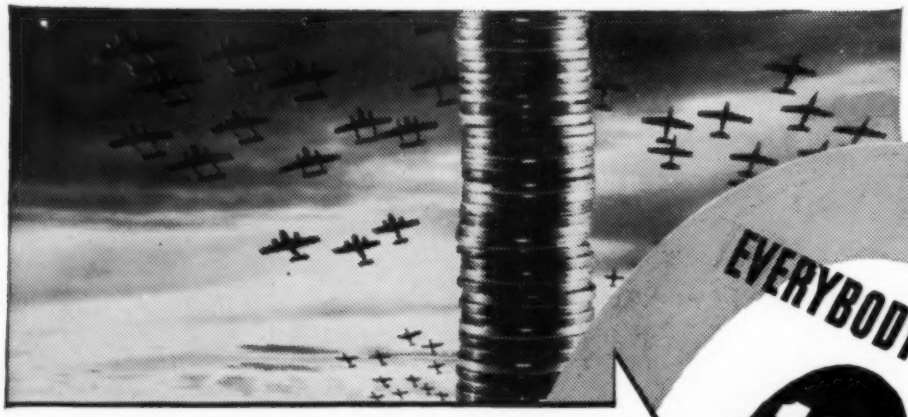
Koppers has been able to furnish supplies of basic materials needed by the transportation industries . . . from Koppers coal mines, from Koppers plants where ties and other wood products are pressure-treated to give them long life, from Koppers creosote refineries, from Koppers roofing and waterproofing plants, and paint factories . . . from plants which make packing for steam locomotives and piston rings for Diesels.

Maybe, some day in the future, these products may serve your peacetime operations as they are now serving wartime safety. Koppers Co., Pittsburgh, Pa.

KOPPERS

THE INDUSTRY THAT SERVES ALL INDUSTRY

BUY UNITED STATES WAR BONDS AND STAMPS



New Target for Industry:

More Dollars Per Man Per Month in the PAY-ROLL WAR SAVINGS PLAN

TO WIN THIS WAR, more and more billions are needed and needed fast—AT LEAST A BILLION DOLLARS A MONTH IN WAR BOND SALES ALONE!

This means a *minimum* of 10 percent of the gross pay roll invested in War Bonds in every plant, office, firm, and factory in the land.

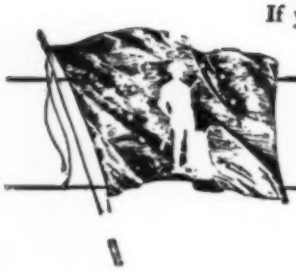
Best and quickest way to raise this money—and at the same time to "brake" inflation—is by stepping up the Pay-Roll War Savings Plan, having every company offer every worker the chance to buy MORE BONDS.

Truly, in this War of Survival, VICTORY BEGINS AT THE PAY WINDOW.

If your firm has already installed the Pay-Roll War Savings Plan, *now is the time*—

1. To secure wider employee participation.
2. *To encourage employees to increase the amount of their allotments for Bonds, to an average of at least 10 percent of earnings—because "token" payments will not win this war any more than "token" resistance will keep the enemy from our shores, our homes.*

If your firm has not already installed the Pay-Roll War Savings Plan, *now is the time to do so.* For full details, plus samples of result-getting literature and promotional helps, write, wire, or phone: War Savings Staff, Section E, Treasury Department, 709 Twelfth Street NW., Washington, D. C.



U. S. War Savings Bonds

This space is a contribution to America's all-out war program by

SOAP AND SANITARY CHEMICALS

Which one of these packages didn't spill?

THE first covered wagon almost stumped its inventors, the early Dutch settlers of Pennsylvania.

At first it was just a box on wheels, with a "poke bonnet" hood to keep the contents dry. But things spilled out. You could pack a lot in the wagon because it was big, but too much of your load would tumble out as it jolted up and down rough hills and roads.

So those Dutch wagon designers of the Conestoga Valley did something. Something quite simple. They slanted the ends of the wagon outward and curved the bottom. The effect looked roughly like a rowboat. Things didn't spill as much—tended to settle toward the center. More, these "rowboat" bodies floated easily across streams.

The rumble of the good-looking, blue and red Conestoga wagon was one of the important sounds in American history. It couldn't have been—if the "package design" hadn't been successful. It was practical. It protected its contents. It filled a specific need.

Our success in designing and developing packages for specific needs is the reason why more than 12,000 businesses call Continental "packaging headquarters." Today, however, war efforts come first.

The experience and resources of Continental are now enlisted in helping the nation. Besides millions of food containers for civilian America, for our fighting forces, and for our Allies, we are producing other packages to protect America.

Anticipating another day, we see many new applications of the things we are learning and doing now. If you are looking ahead or developing an idea, we'll be glad to help you. Our packaging engineers, research men and designers are at your service at all times.

CONTINENTAL CAN COMPANY

Packaging Headquarters for Industry

What will be the PACKAGE of the FUTURE?

The package of the future will be the package that best meets *all* these 10 important points:

1. Protects against light, heat, and dirt.
2. Does not chip, break, or tear.
3. Is adaptable to *highest* speed filling operations.
4. Is economical to pack, ship, and handle.
5. Light weight, compact, no waste space.
6. Moisture and vapor proof, impervious to temperature changes.
7. Easy and convenient to display, sell.
8. Available in wide variety of sizes, shapes, styles (over 500).
9. Offers maximum convenience and safety in consumer usage.
10. Permits high processing temperatures, certain hermetic sealing.

These points made the metal container *first* in packaging. If there ever is another package that has *all* these qualifications, we'll be making it!

PYREFUME is scientifically standardized by both chemical and biological methods, and according to pyrethrins content. Pyrefume has terrific killing power against not only flies, but against roaches, silverfish, bedbugs and other pests.

YEAR after year, Pyrefume wins greater favor with consumers—its effectiveness gaining new customers and keeping old friends satisfied.

REAL stability is achieved in Pyrefume by use of a special anti-oxidant which maintains potency over prolonged periods.

EASILY blending with the usual bases, clear, golden sprays are obtainable with Pyrefume, stainless as a pyrethrum concentrate can be.

FRAGRANCE of the flowers make Pyrefume sprays decidedly pleasant to use.

USED in proper dilution, Pyrefume sprays comply with the standard set by the National Bureau of Standards, U. S. Department of Commerce.

MAKE your pesticide sprays with Pyrefume, a product that has been proven by over a decade of actual use as a dependable insecticide.

ECONOMY is a worthwhile Pyrefume angle. The use of Pyrefume today represents effective economy when its many advantages are considered.

TRIPLE TESTED PYRETHRUM CONCENTRATE

S. B. PENICK & COMPANY

50 Church St., New York, N. Y. **735 W. Division St., Chicago, Ill.**

THE WORLD'S LARGEST BOTANICAL DRUG HOUSE

of certain products in steel containers instead of limiting the use of steel in manufacture of steel containers. The purpose of such wording, you see, is to withdraw completely all steel containers from certain products. The drums on hand will then go to the products that must have them, or they can be made into new steel by being turned in as scrap. By doing it this way, your competitive position as far as containers will be preserved. Also, it shows clearly the futility of "hoarding" containers.

I do know that we have drawn up recommendations as to what products should not be packed in steel. Whether this list will be used as it stands or not, I don't know, so it would be very unfair for me to talk about what is on that list. You know the problem, though. You know that it would be reasonable to start off with solids, the semi-liquids, perhaps to include the thick liquids. I'm not saying that any of these will or will not be included. I'm just suggesting what would appear reasonable to me, but I feel sure that only the products which are essential will be given any consideration in the securing of metal containers.

I can make a suggestion to you that may be of great importance, if it is not too late. It has to do with your relationship with the Government at this time. First, bear in mind that none of us, from the President on down, want to, intend to, or will be, dictators. However, the less that you, and all other business men, do for yourselves, the more you will have to be told what to do. Action is required. Either you do it of your own volition, or the Government tells you to do it.

The surest way I know for you to run your own businesses with a minimum of Governmental supervision is for you to do, *of your own accord*, the things that are required by our society.

The War Production Board can issue a Limitation Order restricting the use of steel containers. It would not have to issue the order, though, if your group here, and all the other users, would start to convert to the use of non-steel containers by yourselves. It is probably too late to head off the Limitation Order now, but for your future guidance, remember that the number, or degree of Government "interferences" will depend upon how much you do yourselves.

I would like to see your group come to us and say "We know steel is short. Here are some ways we can conserve. Here are some substitute materials we can use. Have you any suggestions as to how we can improve the program, either for our benefit or for that of the war effort?" If this were done, there probably wouldn't be any Limitation Order. Or, if there were, it would be merely a confirmation of your action.

I hope you will take this to heart, and act upon it, not only now, but in the future. Now, what I suggest falls no more on your shoulders than on the shoulders of business at large. You may be better than the average in this respect. I don't know.

I do want to make the point clear, even at the risk of being blunt. You are still running your own businesses. The War Production Board is not; does not want to. The degree of influence it will have upon you depends upon what you do for yourselves.

If my remarks to you here today seem strong, I mean them to be. Packaging is an important part of your business; it is a necessary part. I must make this story emphatic so that you will realize the importance of a comparatively small detail to the war program. Containers are a small but vital part of your operations. The steel you use is a small, but equally vital part of the war program. Steel is short. One very definite battle you must fight, and win, is the conversion of many steel containers into tools of war. I have suggested substitute materials to you. I have touched on the positive advantages of them to you; advantages in terms of money saved, new customers gained, reputation strengthened. I have told you that you must not be surprised to see a Limitation Order restricting the use of steel containers for many products issued soon. I understand that a plan is under way considering the appointment of an Insecticide Advisory Committee. Mr. Goldberg will address you on this subject. It is possible that one of the first problems that might be considered is the matter of containers.

The question of increased cost, due to the use of substitute containers, should be taken up with the Office of Price Administration, and I regret to say that I am not in a position to speak for them nor tell you anything about what their attitude would be, but I urge you to present your case with a great deal of detail when submitting the evidence to the Office of Price Administration.

All these things point in one direction—ACTION! I hope you will take steel out of containers and put it into war materials. I hope you will start now. The War Production Board may be along soon to help you, but it is up to you to do the job.

II.—TIN CANS

By Roger V. Wilson

Continental Can Co.

MOST of you are vitally interested in the can outlook. This subject can be summarized in one word—black, or if you prefer, in two words—very black. The present rapidly changing conditions obviously make it impossible for anyone to make very definite statements or any accurate predictions for the future. However, I shall try to review very briefly such facts as are available.

You are all familiar with the M-81 order which limited the production of cans for disinfectants to 50 per cent of 1940 production and the production of cans for fly spray to 100

per cent of 1940 production. On the basis of this order, cans made of tin plate were supplied. For several weeks it has been expected that a supplement to M-81 would be issued. Obviously, no definite statements regarding the scope of this supplement can be made until the order is actually issued. However, there is little doubt that every possible step will be taken to conserve our supplies of both tin and steel.

It might be well at this time to review the progress which has been made by the can industry in conserving strategic materials. For convenience, I shall discuss separately the individual items which go to make up a tin can. These materials are essentially steel, tin, lead, end and side seam cements, closures, and enamels.

Steel is, of course, the fundamental material from which cans are made, constituting over 98 per cent of the finished container. Until the last few months, the supply of steel was unquestioned because much of the steel plate used for cans was made on equipment which could not be converted to the heavier plates used for ships and industrial construction. However, more recently shortages of ingot steel have developed. These have been due to the increasing need for steel used for ships, as well as for plants needed for the manufacture of war materials. In addition, shipping space has been at an increased premium, which has in some cases necessitated the shipment of materials to our allies in the form of ingot steel rather than in the form of fabricated equipment. In the face of this situation, there is naturally a big question as to where the limited amount of steel can best be used.

Most of you know that the supply of tin is limited to present stocks plus the limited quantities of tin available from Bolivian ores. The can industry has, therefore, done an enormous amount of work in an effort to reduce or eliminate the use of tin wherever possible. The first move in this direction was the substitution of terne plate in place of tin plate. Terne plate normally contains from 22 to 25 per cent of tin, the balance being lead. Recently, the steel mills have been ordered to reduce the tin content of terne coatings to not more than 15 per cent. Another means of conserving the tin used on tin plate has been the use of electrolytic tin coatings. Tin can be applied to steel plate electrolytically in much thinner films than is practical by the hot dip method, which has been used in the industry for years. The use of electrolytic tin plate has involved an enormous amout of work on the part of both the steel companies and the can manufacturers. The ultimate goal of the tin conservation program has, of course, been the complete elimination of tin on plate for cans. The elimination of tin presented two main problems, the rusting and corrosion of the plate and the soldering of steel plate on existing equipment. The use of enamel on plain steel gives satisfactory results for many products. A large amount of work has also been done in developing methods of treating steel to make it rust resistant. The best of these treated plates when coated with enamel have given excellent results for many products which cannot be packed in containers made of untreated enameled steel.

Lead is, of course, a strategic material but the supplies of it have so far not been quite so critical as in the case of other materials which are not produced in this country. However, like most metals, every effort is being made to conserve its use wherever possible. The principal use of lead in cans, aside from that used in terne plate, is in the solder used for sealing the side seams and for attaching the closures. The chief reason for the restrictions on solder has been to conserve tin. Considerable work has, therefore, been done to substitute silver for tin. Silver solders look promising for use on hot dipped tin plate and for some types of electrolytic tin plate.

The cements used in the seams of cans have also presented many problems. Rubber must, of course, be eliminated wherever possible. In addition, many of the cements contain resins and solvents which are on the critical list. The demand for cements will, of course, increase because of the substitution of cements for solder. The problem has also been further complicated by the constantly increasing list of non-available resins. So far the can industry has been able to keep pace with the constantly changing conditions and furnish cements made from materials which are still available.

The shortage of cork and facing materials for screw caps has also presented many problems. Here again many substitute materials have been developed only to be put on the critical list. Fortunately, the investigations of a wide variety of materials have enabled us to supply non-strategic materials which will solve the problem.

The resins, oils, and solvents used in enamels have also constituted a problem and the solving of it has made it necessary to test hundreds and even thousands of variations in enamel composition, application and bake. So far we have been successful in maintaining an adequate supply of the enamels which are needed for the manufacture of insecticide cans.

I have reviewed many of the problems which confront the can manufacturer. However, this constitutes only one-half of the problem of packaging insecticides and disinfectants. The other half is the problem of adapting merchandising methods to present conditions. That problem is definitely up to you. In spite of all the scientific accelerated tests which may be conducted, we are still in the position of using containers which are different from those we have used for years. Although we *think* that these containers will be entirely satisfactory, it is impossible to be certain that they will be. It is, therefore, only good business judgment to see that your product is in the hands of the consumer in the shortest possible time. For years it has been a common practice of the industry to stock up their wholesalers and retailers so heavily that insecticides were frequently on the shelves for three to four years after they were packed. Fortunately, in the past the quality of the containers was such that this practice could be carried out. Today, we *hope* that the insecticide containers will be just as good or better than the ones we have used but no one can *know* that they are.

It is fortunate that the affairs

of so many members of this association are directed largely by scientific men. Your Insecticide Scientific Committee, under the able leadership of Dr. Badertscher, has been doing an excellent job for the industry. With the background of data already available, and the wholehearted pooling of scientific information by everyone concerned, there is every reason to believe that this industry, with the full cooperation of your suppliers, will be able to meet the current problems with a minimum of risk.

III.—GLASS CONTAINERS

By Dr. Julian H. Toulouse

Containers Division, War Production Board

THE glass container situation is by no means clear. A number of factors affect it. These represent questions of the availability of raw materials, the move toward standardization and the reasons for it, and finally our work in preparing standardized containers.

Availability of Glass Containers.—At the present time the glass industry has not yet been pushed to capacity. As a matter of fact we are not making as many glass containers as we have capacity for because there has not yet been a demand which would tax this capacity. We do expect, however, that many items will be transferred from tin to glass and in doing so to the fullest logical extent, there would be a serious tax indeed upon our resources. In order to meet such a condition, we are now engaged in a standardization move designed to increase our effective production.

Standardization.—The problem of standardization has several goals. One of the first of these is to save glass-making material. There is no threatened shortage in glass-making material as the condition surrounding the one material that was in demand; namely, soda ash, has been relieved. Nevertheless, the more we can save this material, the better would be our overall position in the economy. We can do so by going to the lightest weight for any bottle of a given capacity and this, in general, means going toward short bottles and round shapes.

Again in standardization, by reducing the amount of glass-making material needed, we will save fuel. This is doubly important in both the natural gas and fuel oil fields because in the case of gas there is a great demand for all the available capacity, and in the case of fuel oil, you are all aware of the situation concerned with its shipment and availability.

A third goal of standardization is to save shipping space. The short, light bottles use less space and because they weigh less can be packed with more items to the carload. A single large company by a standardization move that lightened its total purchases of glass by 3,800 tons in a year's time saved 125 cars shipping space, both coming from the glass factory to it and an equal amount in its own shipping away from its own plant.

A fourth, and of importance equal to the first goal, is that of saving machine time in manufacture. We have machinery in the glass industry that can make far more bottles if they were not loaded up with inefficient short runs and heavy slow operating designs. We expect to add a great deal of production by means of standardization toward longer runs and more efficient designs.

There are a number of excellent backgrounds for this work. One of these is the work of the Bureau of Standards on this subject during the past many years. We are consulting them at every opportunity and trying to incorporate in our orders all of the valuable work that they have done. The glass-making industry also has had standardization committees for several years and they, again, have vast information of value.

As part of our own efforts, we have set up a standardization group of the glass container industry as a segment of our own industry advisory committee which functions much as other committees in other industries. We have had several meetings on standardization. At the same time, whenever any other industry, as a user of glass, is involved, we consult with any problem of standardization with the full knowledge and advice of the makers and the users of the glass container.

General Plan.—In general, our plan is this: we wish to move toward the simpler shapes as outlined above, such as plain rounds and shorter bottles. Sometime ago I developed an analysis of the relationship of shape to amount of glass necessary to make the bottle. In developing this, we used a sphere, a cylinder, a cube, and a rectangular prism all holding the same capacity, 60 cubic inches or just over one quart and all made with ⅛″ wall thickness where round, and 3/16″ wall thickness where flat. We found that theoretically we could make a sphere with 14 oz. of glass, a cylinder with 17 oz. of glass, a cube with 27 oz. of glass and the prism with 34 oz. of glass. The prism had a height double its width and a thickness of half its width and was chosen arbitrarily for purpose of comparison. The above shows why we want to go toward simple short round shapes which approach the cylinder in ideal.

In doing all this, we must give due consideration to the equipment that has to be fitted. We would rather make an odd shape bottle than force the user of that bottle into the market for a new machine. We know that machinery cannot be bought unless there is absolute necessity for it and to that extent we are willing to deviate from standards. We also must make a thorough study of the question of stock versus private molds. Our present thought is to allow private molds to be made if they approach closely the

weight of the standard container of the same capacity. At present our thoughts have a tendency to define the word "closely" so that a private mold under these conditions should not weigh more than one-half oz. plus 10% per cent of the equivalent shape of the same capacity. This formula, of course, is only in the making stage and may be revised before actually issued.

It is on this question of private versus stock designs that we need your advice. We want to know what you believe should be made the standard sizes. We should like to know what type of bottles you use—whether they are plain rounds, such as the Boston round, squares, ovals, oblongs, such as the "Blake" bottle, or what other shapes are generally used. Could the products known as proprietary medicines be packed largely in plain rounds, or minor deviations therefrom?

Another point on which we need advice is the range of sizes for each particular type of product. Bearing in mind that the biggest need we have is the increased production that is possible from making one or two carloads at a time, can you reduce the number of sizes of each product to no more than two or three? That is to say, could a given product be packed in 2 oz., 8 oz., and 16 oz. sizes instead of a whole range? These figures are taken as an example only and do not illustrate any desire to confine everything to those three sizes. Bear in mind also that closures are a difficult thing to procure for the future and that some restrictions will be necessary. One of these restrictions could be met by going to the larger sizes of any given range, cutting out most but not all of the small sizes and at the same time, reducing the size of opening to the minimum possible. All of these are things on which we need your advice in order to do an intelligent job of standardization.

Issuance of Schedules by WPB Order.—The final step in our standardization will be to issue schedules listing the sizes that can be used, as has already been done under Limitation Order L-103 in the case particularly of distilled spirits and of beer bottles. Not only did the Limitation Order itself stop, for the duration, the creation of any new designs, but it also limited distilled spirits bottles to a standard set of four beginning on January 1, 1943, and it limited the beer bottles to the standard series of eleven beginning on the same date. Other schedules will follow as soon as they can be developed.

IV.—STEEL DRUMS

By Gordon D. Zuck

Wilson & Bennett Mfg. Co.

IT IS a pleasure to have this opportunity of speaking to you today—although it is obviously quite difficult to talk about an item, the sale of which is at present so completely restricted and controlled. I expect the thing you would like to hear the most about is the availability of steel drums—and unfortunately that is the one phase of the subject that I can discuss the least today. There are two reasons for this, the most important of which is that Mr. Donald Knapp is speaking to you also on this program and if there is such a thing as having all the answers, I am sure Mr. Knapp is the man to give them to you. He is in a position to be quite familiar with your problems and I am sure his comments on steel containers will be most enlightening.

I believe it will be of interest to review briefly the program that the steel container manufacturers have followed since last fall for the purpose of explaining why you have had relatively few, if any, problems in obtaining steel containers for the full extent of your requirements,—up until about two months ago.

Inasmuch as steel is such a vital part of our program of winning the war, it is only natural that a governmental control be set up to determine who should get it and to see that it be used where it will do the most good. It is obvious that since last summer or early fall, it has been the purpose of this control of steel usages to reduce civilian consumption of it gradually so that as our war effort progressed and consumed more steel, it would be made available through the reduction in non-essential uses. At the same time this gradual tapering-off process would give you and other users of steel containers a chance to develop substitutes and to perfect methods of obtaining a return of packages then in service so that when the time came,—as it did the first of April,—when we were not permitted to accept orders for steel drums unless they were accompanied by priority—you would not be quite so seriously handicapped.

Early last fall this control body (then OPM, now WPB) made it possible for us to get about 70 per cent of the amount of steel we consumed in making drums and pails for you and other industries during the first part of the year. The first of this year the percentage was reduced very materially, however, during all this time we were able to continue to give you almost 100 per cent of what you ordered. The reason being simply that we normally carry quite large stocks of steel in standard sizes so that we were able to draw on this inventory stock to make up the difference between the percentage of steel we were allocated and the amount needed to take care of your orders. Of course, as you know, on April 1st this program was changed and it became mandatory that we deliver containers only on orders carrying priorities. Accordingly, that probably represented about the first that your operations were seriously affected by the curtailment in the available steel for containers.

It is of course a proven fact that some products must be shipped in

steel, depending, naturally, upon the nature of the production and the handling and shipping and storage problem involved. This is said with all due respect to wood or fiber or any other material that may be considered as a substitute for steel. As an example of the accuracy of this statement, the Army and the Navy recognize that many of the products they purchase, such as chemicals, disinfectants, germicides, soaps, etc., must be packed in steel containers to properly carry these products and to protect them through the various handlings to which they are subjected, and specify steel containers regularly. Such orders will, of course, carry priority ratings that are high enough to enable you to get the steel containers required.

Just what method can be followed to get steel containers for other than this direct defense business, I will not attempt to discuss at this time but will rather leave it to Mr. Knapp.

Out of all of these emergencies and consequent shortages always come some beneficial developments and I believe your business and ours has been benefitted in a number of ways by this present situation. For example, the curtailment in availability of many types of packages has caused you and other industries to adopt a very practical and sensible package standardization program that reduced the number of sizes and styles of packages that you use. This has, of course, reduced the inventory you have heretofore found so necessary and it has also reduced your cost through simplifying and expediting your filling operations. These savings and advantages are unquestionably of sufficient importance to you that you are not going to discard them when the war is over.

One important bit of progress in our business that is of interest to most of you, is the development and perfection of lacquer and enamel interior linings that now make tin lined and galvanized drums and pails practically entirely unnecessary.

Even a few months ago when steel containers were still available to you without priority, tin and zinc were very acute and many manufacturers who had in the past been reluctant to adopt lacquered-lined steel containers, discovered that they were actually better than galvanized or tin lined packages for many of their products.

It is of interest to know that there are relatively few chemicals for which a completely satisfactory lining has not already been perfected and proven. We, as a company, are not only maintaining our research and development program on this subject, but are actually extending it. Everyday sees the perfection of a new lining or the simplification of an application or an improved formula or the extension of some already existing lining to a new field or product.

As evidence of the recognition that is being given to lined containers today, I understand that over 90 per cent of the container specifications issued by the various governmental planning and procurement offices, which in the past have specified galvanized or tin-lined containers, have now been revised and these specifications describe and fully approve lacquered or enamel lined packages.

Recently quite exhaustive tests were run by one of the large governmental research and testing laboratories on a product that has heretofore been bought by them only in galvanized drums. This test revealed that the product was preserved in perfect condition in lined drums whereas a zinc percipitate developed in the galvanized drum. It was the enthusiastically expressed belief of the chief of this research laboratory that he fully expected that after the war is over and zinc and tin are again available they will be rarely used for product protection.

This is something you will undoubtedly want to give serious consideration to at this time. The combined advantages of better protection to your product and the possible lower packaging cost is certainly of more than usual interest, and this is something that you could lay the ground work for now for use after the war. You can test out these lined containers with your various products and be ready to use them later on when they will once again become generally available.

In conclusion, I just want to say that while, like all other industries today, we are devoting our entire facilities and time to the business of winning this war, at the same time we are continuing our research and development of new and improved packages for your use in peace time, and we all hope we may very soon have the opportunity of serving you on a peace time basis.

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Pest Repellent

The following mixture is reported to be particularly useful against the blow or maggot fly, for which it is sprayed on sheep: carbon tetrachloride 46 per cent, kerosene 46, castor oil 3, paraffin oil 3, and eucalyptus oil 2 per cent. Wm. Filtness. Australian Patent No. 109,014.

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Louse Remedy

A mixture of a 2 per cent solution of anabasine sulfate with 0.5 per cent of green soap is completely effective against head lice and has no harmful effect on the scalp. V. M. Pivovarov. Z. Microbiol. *Epidemiol. Immunitatsforsch.* (*U.S.S.R.*) 1940, No. 4, 130-2.

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Solubilizing Phenols

The solubility of halogenated alkyl, aryl and aralkylphenols in soap solutions is increased by an addition of 3-4 per cent of ortho-phosphate ion. This addition keeps the solution homogeneous even at low temperatures, a fact of great importance for disinfectants. Gunther Endres. German Patent No. 680,439.

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Germicidal Polish

Insecticides and germicides are incorporated into a polishing composition for ffoors, linoleum and furniture. An example is: Paraffin wax 70 parts by weight, carnauba wax 15, ozokerite 10, and beeswax 5. The waxes are melted and mixed with 300 parts by volume of turpentine containing 4 per cent of hexachloroethane. The insecticides and germicides used are water-soluble but do not dissolve in the wax or in the diluent. They are preferably alkaline or adjusted to pH 8-11. Hexahydrophenol is used preferably in an acid medium. Max B. Segall. Australian Patent No. 108,087.

Styled

TO STOP SHOPPERS

SMART stock designs and a wide range of sizes make Maryland Flint bottles and jars suitable for such widely varied products as perfumes and pharmaceuticals, shoe polishes and shampoos. Tell us the nature of your product and sizes packed and we will send appropriate samples.

Maryland FLINT BOTTLES AND JARS

SORRY! *War has stopped production of rich, deep Maryland Blue. But, in post-war competition you'll need more than ever the ability of Maryland Blue to "stop the eye and start the sale." Put a note in your post-war plans file: "Look into the merchandising advantages of Maryland Blue Bottles and Jars."*

MARYLAND GLASS CORPORATION, BALTIMORE, MD. . . New York: 270 Broadway . . Chicago: Berman Bros., 1501 S. Laflin St. . . St. Louis: H. A. Baumstark, 4030 Chouteau Ave. . . Memphis: S. Walter Scott, 435 S. Front St. . . Kansas City, Mo.: Aller Todd, 1224 Union Ave. . . Cincinnati: J. E. McLaughlin, 401 Lock St. . . San Francisco: Owens-Illinois Pacific Coast Co.

The PINE OIL Outlook

*By Frank U. Rapp**

Hercules Powder Company

PINE oil may be defined as a mixture of cyclic terpene alcohols and cyclic terpene hydrocarbons obtained from the pine tree stump in the South. There are three general methods of removing these liquid terpenes from pine wood; namely, by steam distillation, destructive distillation, and extraction. Since we have been alloted a very limited time to discuss this subject, we will confine our remarks to the products obtained by steam distillation. This method has been in continuous operation since 1910. It was first conceived by Homer T. Yaryan and later put into practice by several producers.

Limited production was made available in 1911. The product was comparatively crude, and very little was known of its chemical constituents. The mining industry started to investigate chemical flotation to replace mechanical separation at this time. Pine oil was found to be a very satisfactory flotation medium for recovering copper, nickel, lead, zinc, molybdenum, silver, and gold. This development occurred at a time when pine oil was being produced and stored because there was practically no demand for it. Fairly reasonable stocks had been accumulated when the mining industry adopted it. During this early period this crude product was also being used as a basic raw material for the manufacture of disinfectants and insecticides. However, the volume demanded by this industry was very small.

To give a better idea of the amount of pine oil that was made available, we quote production figures at ten-year intervals as reported in Gambles International Naval Stores Year Book.

	Pounds
1911	483,000
1921	3,590,000
1931	20,980,000
**1941	47,000,000

It will be noted that the producers increased production 642 per cent in the first ten years of this product's existence. In the succeeding ten years, production was increased 485 per cent; in the 1931-1941 period 124 per cent.

For a good many years, more pine oil was produced than the various markets could absorb. Since, in operating a Naval Stores business three major products are obtained simultaneously, namely, turpentine, pine oil, and rosin, it is necessary, in order to maintain an economical balance, to sell all three products in the same volume they are produced. World conditions may bring about periods when rosin and pine oil are in greater demand than turpentine. At other periods industry may demand excessive quantities of turpentine and normal quantities of rosin and pine oil, while in very few instances has there been a demand for all three at the same rate that they are being produced.

We are in one of these unusual periods. Turpentine, rosin, and pine oil demands have been very heavy since the war started.

Improvements have been made in all of these products since their discovery and considerable research work has been sponsored by producer and consumer ever since. All of this research work developed new uses for pine oil and, as a result, brought a temporary shortage of pine oil in the early part of 1937. Since that time, many industries have depended on the pine oil producers to make increasing quantities available. The mining industry has adapted pine oil to many types of flotation and you all know how important metals are in support of our war effort. Early reports from the mining industry indicate that they will require increasing quantities of pine oil in 1942 as compared with their 1941 consumption.

The textile industry adopted the use of pine oil because of its unusual wetting-out action, scouring ability, and solvent property. Today the woolen industry, the cotton mills, and rayon plants consider pine oil an essential raw material for wet processing of all types of fabrics. We are all familiar with the tremendous production schedule that has been assigned to the textile industry.

The paint and varnish industry finds diversified applications for pine oil. It is surface active, has a high-boiling point with corresponding low vapor pressure, and is an excellent solvent, a combination of properties rather unusual. This is utilized extensively in improving flow-out characteristics of paints and varnishes. Pine oil is also widely used for wetting out pigments.

The paper industry is using pine oil in casein mixes and as an anti-foaming agent in paper coating processes, and more recent developments show it to be a valuable reagent for de-inking paper stock. Now that we are conserving waste paper, it is very timely that pine oil should be made available to serve this purpose.

The soap industry has been turning to pine oil in recent years. It contains aromatic constituents that serve as a basis for many perfume blends.

The essential oil industry demands more pine oil and derivatives therefrom to extend the supply of raw materials that were formerly imported.

The industrial and commercial laundries have set up washing formulas demanding more pine oil because it accelerates the action of soap and alkali and helps to remove the last trace of dirt and imbedded grime from all types of fabrics.

(*Turn to Page 11*

* Address before the 28th mid-year meeting, Natl. Assn. of Insecticide & Disinfectant Mfrs., Chicago, June, 1942.

** Computed by P. J. Weber, Economist.

INSECTICIDES . . . and the W. P. B.

An industry advisory committee, and comments on W. P. B. insecticide and disinfectant plans*

By Melvin Goldberg

Chemicals Branch, War Production Board

YOUR industry has some problems to solve,—your problems are my problems, so I think this is a most welcome opportunity to discuss some of the things that are worrying you. With what problems that face the manufacturer of insecticides and disinfectants can I help? The first thing is not an answer in itself, but is a means to an answer. It is the formation of an Industry Advisory Committee for insecticides. Such a Committee can be an enormous help to you and to the War Production Board in bringing together the several points-of-view operating in your industry, and will help formulate war policies.

The second thing I may be able to help you with is priorities. You have plenty of interest in that subject. And then there is priorities' first cousin, allocations, limitation, and conservation orders. These orders are the heart of your participation in the war effort, and their operation has a profound effect on the course of your own business.

Now, first, what about this Advisory Committee? I believe one should be formed to help us over the rough spots ahead. And there are going to be some rough spots. This container matter wants some pretty strict attention. Transportation needs some study. And so do many other details of your operation in a war-time economy.

How can a Committee be formed? The procedure for the formation of an Industry Advisory Committee is quite simple. When the formation of the Committee is first considered, the Government Presiding Officer submits the written request for such a committee to the Bureau in the War Production Board charged with that function. This original request stipulates that the first meeting will be held at least within three weeks after its formation.

We don't have Advisory Committees for fun. There is a restriction that no committee will be formed unless there are immediate specific problems requiring discussion with a representative group of the industry. We have the problems, all right. In proposing the formation of a Committee we must realize that the Committee must have definite and specific problems with which to concern itself. We like to suggest, as a matter of feasibility, that the number of committee members be kept as low as possible. Experience has shown that large committees are unwieldy and ineffective. In general, committee members should be the executive heads of their respective companies or persons suggested by them from within their organizations.

Supporting data must be submitted to show that the Committee is representative of the industry. Such data should deal with the size of each company in the industry, its geographical location, its trade association membership or non-membership, its production classification and the nature of its functions, that is, whether it is a manufacturer, a processor or a distributor. This is your assurance that the Committee will represent all points-of-view.

Accordingly, I should like to suggest to you that you give immediate consideration to forming such a Committee, since it now appears certain that the container question must be considered promptly. I shall be glad to help the members of the association in initiating the movement for such a committee. Formation of an Advisory Committee is a forward-looking step—but there are many things of the greatest importance going on right now that you must understand thoroughly in order to do business intelligently, so I thought you might like to have me talk about priorities for a few moments.

So here is a general view of priorities. Effective July 1, it will be almost mandatory that all industries use the Production Requirements Plan on Form PD-25A. This plan has been designed to enable the manufacturer to present a complete picture of his operations and of the material requirements for production over a three-month period.

Under the Production Requirements Plan the applicant manufacturer reports detailed inventory information on each item in stock; and also tells what he will need in the next three months. I might add that the Form PD-25A has recently been revised and greatly simplified, also the Form PD-25X which previously was used by a manufacturer whose business was less than $100,000 has been thrown out and the simplified PD-25A substituted. The

*Address before the 28th mid-year meeting, Natl. Assn. of Insecticide & Disinfectant Mfrs., Chicago, June, 1942.

Production Requirements Plan or "Purp" as it is getting to be called, will enable the War Production Board to understand your problems, and help meet them.

Many conservation and limitation orders have been necessary for successful prosecution of the war and they are of interest to you. Under such orders phenol and cresylic acid supplies for disinfectant purposes have been curtailed drastically, and it appears fairly certain that it is curtailment for the duration. This, of course, is brought about by the heavy demand for war requirements.

Conservation Order M-105, dealing with the allocation of naphthalene, will undoubtedly affect many of you in the coming months. Under this order naphthalene is allocated by the War Production Board to the producer, who in turn is responsible for the distribution into the hands of dealers and the ultimate consumer.

General Preference Order M-41, regulating the distribution of chlorinated hydrocarbon solvents, has been amended recently. The materials covered by this order—carbon tetrachloride, trichlorethylene, perchlorethylene and ethylene dichloride—will undoubtedly become a little tighter in the near future. This is due to the tightness of chlorine itself. An attempt has been made to reserve most of the supplies of these materials for direct war uses. Deliveries of some of these solvents have been restricted to 50 per cent consumption used during the base period.

Conservation Order M-152 placed arsenic under direct allocation. While the shortage of arsenic is not critical it is considered prudent to conserve the available arsenic supplies to take care of any contingencies. By the terms of this order the amount of material delivered to any user can be restricted as well as the specific use for which the material is to be consumed. Formal allocations will start July first and will be on a calendar quarter basis.

Rotenone Order M-133 has recently been amended to allow the use of rotenone-bearing materials as a spray, wash or dust in the treatment of cattle for the destruction of grubs. This amendment does not permit the use of these materials as a spray, wash or dust for repelling and killing flies, mosquitoes, deer flies, horseflies, sand flies, chiggers and similar insects. This conservation effort is necessary in order to conserve the stocks of material which are present in this country. Since our resources of this material are so uncertain, it is absolutely essential that we conserve and use very wisely whatever stocks we do succeed in obtaining. Negotiations are under way to open new sources of this material in Central and South American countries. We urge that where possible, even though M-133 allows the use of rotenone, that substitutes be used. While the results with these substitutes may not be as effective as the control obtained with rotenone, nevertheless substantial benefits can be obtained.

These orders of the War Production Board sometimes impose severe restrictions on your operations. I'm sure you realize, however, that only the direct military necessity is responsible. Imposition of WPB orders will bring victory more quickly and more certainly.

I hope you will do something about this Advisory Committee. While such a group is primarily for your benefit, the WPB will also find it very useful. The formation of an Advisory Committee is up to you, not the WPB. I feel very strongly that you have much to gain through the proper functioning of this committee, but I can't tell you to form it, I can't form it for you. It's your job, and all I can do is to point out that your problems will be solved more easily and more quickly if you are able to express your industry point-of-view through a good Committee. You have a big part to play in gearing our economy to war; you have done a good job, and I'm sure you will do an even better one!

Pine Oil

(*From Page* 111)

The disinfectant industry is one of the oldest users for this product, but here again research has enabled them to adapt this raw material to many products; — disinfectants, bar soaps, household cleansers, industrial cleansers, metal polishes, scrubbing soaps, hand soaps—are all demanding their share of pine oil, to mention nothing of the contented cow that gets a seasonal treatment of pine oil cattle spray.

There are many other uses for pine oil, but the foregoing remarks should give you some idea of the demand for pine oil since 1937 compared with those lonely days in 1911, when two industries were trying to consume the domestic production of pine oil.

The pine oil producers are not able to adjust themselves to changing world conditions as readily as most industries. In most instances, it is merely a case of putting on an extra shift and producing the additional tonnage. In our industry we operate 24 hours a day and 365 days a year. The only way that we can increase production is through increased plant capacity. This means consumption of essential steel and a variety of other metals. However, this tremendous demand for pine oil has not caught the producers unprepared.

Research work has been in progress for the past four or five years to make pine oil synthetically. During the latter part of 1941, synthetic pine oil started to flow from the production lines. It is rather expensive compared with natural pine oil now because the basic raw material used in the chemical reaction doubled in price since the war and operating costs are high.

Industry needed more pine oil regardless of cost. A certain volume of synthetic pine oil was made available at 16½ cents a pound. It definitely relieved some of the pressure. Through continued research, resulting in higher efficiency, producers are now able to make it available at 10 cents a pound in tank cars in the South. Chiefly because of synthetic pine oil production, there will be more pine oil available in the next twelve months. Earlier in our report, we mentioned that 47,000,000 pounds** were produced and sold in 1941. With natural and synthetic operations at peak capacity, producers should be able to make 55,000,000 pounds to 56,000,000 pounds** in the next twelve months. In conclusion, we feel that the pine oil producers will be able to take care of any reasonable demand.

The Raw Material Situation in COAL-TAR DISINFECTANTS

By J. H. Carpenter*

The Koppers Company

SINCE all phenols, the nomenclature utilized by the War Production Board for cresol, cresylic acid and acid content of tar acid oils as well as benzophenol itself, are under complete allocation, a discussion of the coal tar raw materials available for disinfectants under existing conditions is a difficult one. The interest of all members of the disinfectant industry is not so much at the present time in the kind or specification of cresol or cresylic acid which they will receive but rather how much they will receive and when it will be obtained. In this connection you may be surprised to learn that you are, in the writer's opinion, operating a fortunate industry when it is considered how vital cresols and cresylic acids are in our war program. This statement is made with the qualification that it means those of you who are producers of disinfectants and does not mean disinfectant companies who use or buy tar acids for engine cleaning compounds, degreasing compounds, toilet or textile soaps, for resale for indefinite purposes or for the many other uses not primarily connected with destruction of germ or insect life. Since, however, it is difficult to generalize on the different coal tar materials used for disinfectants, it appears better to consider each one separately and divide them into I. Cresol, II. Cresylic Acid, and III. Tar Acid Oils.

Cresol

When a producer makes maximum volume of U.S.P. Cresol which could possibly be manufactured, nothing is left of a type which could be used for such vital purposes as tricresyl phosphate manufacture for degaussing cable to prevent action of magnetic mines on vessels protected by it or for many types of resins necessarily produced from Meta Para Cresol or for some important uses in the oil industry. However, possible production of cresol is far in excess of the maximum that could ever be utilized for disinfectants.

Under the allocation system, whereby all orders must be in the hands of producers by the 15th of the month preceding month of shipment and applications in the hands of the War Production Board by the 20th of the month preceding month of shipment, the War Production Board has an opportunity to consider the requirements of all industries at one time, to know what uses of materials are required for the following month, exact inventories of each buyer and to carefully make decisions as to what each buyer can obtain from total amount to be produced by all tar acid manufacturers during the following month.

In spite of the important demand for cresols in other industries, generally applicants for U.S.P. Cresol to be used for Liquor Cresolis Saponatus have obtained all or a very substantial proportion of their requirements covered by their applications unless such requirements were far in excess of previous pro-rated consumption. It should be emphasized, however, that this statement applies only when buyers make detailed application to the War Production Board on PD-180 forms showing inventories and uses and where the use shown was for disinfectants which, for U.S.P. Cresol, should mean U.S.P. Cresol Compounds. There is some prospect that this situation may continue because, with the U. S. Navy adoption of synthetics on a performance basis allowing any type of a sufficiently high coefficient, almost odorless, soluble, non-irritating disinfectant, free from hypochlorites or peroxides, the demand for U.S.P. Cresol for disinfectants, even under present abnormal circumstances, may actually be less than heretofore.

U.S.P. Cresol has not been imported in volume since 1922 because of protective tariff, therefore manufacturers of disinfectants have not had to endeavor to get domestic supplies where formerly they imported them and thus allocations have been easier to grant in proportion to previous supplies.

If, however, U.S.P. Cresol for disinfectant purposes is, in the future, allocated in decreasing quantities, a possible suggestion to producers of U.S.P. Cresol Compounds is that they might add some low boiling cresylic acid or ortho cresol fractions with low phenol content to the U.S.P. Cresol they obtain, thus increasing the volume and still having a resulting acid distilling 90 per cent between 195° and 205° C. with proper specific gravity and solubility limitations and with phenol content not in excess of 10 per cent to avoid necessity of declaring more than 5 per cent phenol on the label of the marketed disinfectant. A phenol content up to 15 per cent in a cresol to insure not more than 7½ per cent in the finished compound as for Bureau of Animal Industry Compounds, would be helpful under present conditions. The previously mentioned additions are possible because producers of U.S.P. Cresol generally sell a product well within the limitations of the Pharmacopoeia as, for instance, 90 per

* Address before the 28th mid-year meeting of the Natl. Assn. of Insecticide & Disinfectant Mfrs., Chicago, June, 1940.

cent within a range of 7° or 5° C. and with phenol content at some maximum figure less than 10 per cent. The addition of cresylic acid to increase the volume might, of course, decrease solubility and this would have to be checked so that both U.S.P. Cresol and the finished compound conforms to U.S.P. standard. However, the cresylic acid or ortho cresol fraction might be as difficult to obtain under allocation as the cresol, hence this suggestion may prove impractical but is worthy of consideration when conditions demand.

Cresylic Acid

The situation on cresylic acid, generally speaking, is very similar to that of cresol. If all cresol were removed from the commercial cresylic acid, leaving only xylenols and the higher boiling acids, the xylenols prepared to certain specifications would still have many vital uses for resin, tricresyl phosphate and oil purposes but nevertheless, generally all consumers who make cresol compounds (cresylic compounds) have been receiving allocations of substantial volume from one source or another if for disinfectant purposes and if in reasonable proportion to former purchases and properly applied for on allocation forms showing ultimate use of the disinfectant prepared. This is true in spite of the enormous demand for these xylenols for other important purposes. This statement, however, does not necessarily apply to former importers who resell or even disinfectant manufacturers who depended upon foreign acid previously.

It might be stated here that there is much foreign imported acid on the market at the present time. While it is under a type of allocation by the War Production Board, sellers of it have sometimes been unable to find markets because their prices are approximately twice as high as those prevailing for domestic acid. Naturally, orders and allocation applications are first placed for domestic acid but where the war demand has made it impossible to grant allocations for the lower priced types for disinfectant purposes, the War Production Board has been able to allocate imported acid if the consumers are willing to purchase it at its prevailing price schedules.

The War Production Board has very wisely insisted on following the ultimate uses of tar acids through to final application and therefore, it is rarely, if ever, that resellers are allocated cresylic acid to be disposed of as they see fit to the highest bidders.

It should be remembered by the consuming industry that the amount of coal tar acids appropriate for high coefficient, soluble disinfectants as, for instance, a coefficient 5, is in much smaller volume than acids giving lower coefficiencies and therefore unreasonable demands cannot be met by producers regardless of allocations.

Since cresylic acid for disinfectant manufacture is being made available because of its importance for this purpose, nothing could be gained, according to the writer's estimate, by reducing the allowable amount of cresol and cresylic acid in a compound. It would appear better to allow the present specifications of not less than 50 per cent in a compound to remain in effect for tar acid disinfectants and consider synthetic disinfectants under a different classification. Also, it would appear better if disinfectant manufacturers did not insist upon maintaining a certain high guarantee of coefficiency since total material available of the high coefficient disinfectants is much less from the plant of any producer than the low coefficient types, although of course, any shortage of the higher coefficient types could be relieved by imported, duty free cresylic acid if allocated and available. The duty free line is 75 per cent off in distillation at 215° C. and any acid distilling less than 75 per cent at 215° C., if not an especially made synthetic blend of very high boiling acids and cresols, is necessarily composed mostly of xylenols and higher boiling acids and is therefore appropriate for high coefficient, soluble disinfectants.

Tar Acid Oils

Tar acid oils might be divided into two classes, those containing all the acids or all the acids after partial removal of phenol, and those being made of high boiling acid added back to neutral oil. The former types are probably not now available in substantial quantities because all producers having acid extraction equipment, are endeavoring to produce maximum volumes of cresol and phenol for war requirements.

The second type is the one giving high coefficiencies in disinfectants. After acids are removed from the carbolic oil fractions obtained in the distillation of tar, the oil is chilled to remove naphthalene and sometimes treated to remove tar bases. The resulting neutral oil is very excellent for disinfectant manufacturers. To it is added the high boiling acids after distilling off the phenol, cresol and some of the xylenols and the amount of high boiling acids added to the neutral oil depends upon the manufacturers' guarantee of acid content or coefficiency obtainable in finished disinfectants. Obviously, a guaranteed coefficiency would be dependent upon a specific formula and test made by a specified laboratory.

The method the War Production Board uses in allocating tar acid oils is by the acid content in the tar acid oil in pounds which manufacturers can ship to any company. Thus, if a company is allocated 4,300 pounds of acid for acid oils, this is equivalent to 500 gallons, calculating 8.6 pounds per gallon. The buyer may have placed an order for 3,000 gallons of 25 per cent tar acid oil to give a coefficient of 5 whereas against his allocation, the producer can supply only 2,000 gallons of 25 per cent tar acid oil, i. e. 500 gallons of tar acid content.

The acid oil manufacturer's 25 per cent tar acid oil, however, may regularly give a coefficient far in excess of 5. The consumer of the oil may order his 500 gallons of acid placed in 20 per cent tar acid oil to get 2,500 gallons and resulting coefficiency may still be in excess of 5. The cost of the acid oil might be reduced and the available supply of acid for acid oils would be conserved.

This procedure is highly commendable in times of shortage. There is absolutely no reason why the N.A.I.D.M. should consider lowering the

standard of quality to allow marketing of approved disinfectants with less than 65 per cent acid plus coal tar oil content when the supply of neutral oil is ample to take care of requirements and as long as it is not under allocation as at the present time. Instead, producers of disinfectants can maintain a regular formula with their regular acid plus oil content and their regular guaranteed coefficiency but with no assurance or guarantee of actual acid content in their disinfectants.

If producers of disinfectants insist upon giving far more acid and far more coefficiency than absolutely necessary, there may develop an acute shortage of acids for tar acid oils because there ars some very important war purposes for these oils besides the preparation of disinfectants as, for instance, engine cleaning compounds and flotation of ores. On the other hand, if such producers will insist upon their coefficiency not being far in excess of guarantee on coefficiency and not show a declaration of acid content on their labels, there should be a sufficient volume of acid available to not render it necessary to lower the 65 per cent guarantee of acid and oil content in finished disinfectants which is equivalent to assuring the buyers of such disinfectants that water content will be very little if at all in excess of 10 per cent and that they are therefore not buying water in finished emulsifying type disinfectants.

Naturally, some consumers have been disappointed at times in not being allocated the amount of acid oil requested but certainly in many instances their disappointment is no greater than if no allocation system existed and they endeavored to purchase in times of shortage from sources with outputs mostly sold under contract and from whom purchases were not previously made.

Frequently, a buyer of only a few tank cars per year of tar acid oil, has requested allocation of several months' supply in the form of a whole tank car for shipment during the next month or second month following receipt of a tank car allocation. In making the allotment, the War Production Board may only allow one-twelfth or one-tenth of a previous year's supply which would necessitate shipping in less carload lots in drums and at a higher price for the oil, i. e. the manufacturer's less carload price and with higher transportation charges, i. e. less carload freight rates. It should be pointed out that if a less carload shipment is allocated and the consumer can and prefers to wait one or two months for additional allocations, subject to manufacturer's permission, the various allocations can be shipped as one unit. The manufacturer of the acid oil could provide for this by showing on invoices the amount allocated each month as, for instance, a certain gallonage for April allocation, a certain gallonage for May allocation and balance to make up entire amount shipped, for June allocation.

It should be mentioned that the manufacturers of acids and acid oils are required to list to the War Production Board besides all orders on file for the following month, detailed information as to amount shipped during the full year of 1940 and the full year of 1941 for the companies from whom orders are received. Obviously, the War Production Board gives first allocation consideration to consumers in previous years where prior consideration is not necessary for war purposes and is reluctant to force a buyer to seek new sources if at all possible to allocate prorated requirements from established sources.

Conclusion

The coal tar industry is making every possible effort to render available to industry the maximum quantity of acids and acid oils. Crudes with very little acid content not heretofore used, are being separated far from refining plants and in some instances cost of transportation and preparation alone is actually in excess of the sales price of the finished product. If the war demand for these products increases, and it is almost assured that it will increase for cresols for resins and plasticizers, amounts available for the disinfectant industry may become less but this may be compensated for by corresponding decrease in demand if additional large buyers change their specification and adopt synthetic disinfectants purchased on a coefficiency basis. Certainly the industry has not suffered as much thus far as many others. Credit for this situation is due to its importance as determined by the War Production Board. It must be emphasized in closing, that if all producers of disinfectants are exerting their efforts to take care of the requirements of their established outlets as carefully as the War Production Board has been doing in enabling coal tar raw material producers to take care of their tar acid requirements for disinfectants under the allocation system, there should be, up to the present time, no justified basis for complaints.

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Insecticide Stabilization

An insecticidal preparation containing derris root is stabilized by addition of a product of reaction of an aliphatic ketone with a diarylamine, such as the product resulting from the reaction of acetone with diphenylamine. Dominion Rubber Co. Ltd. Canadian Patent No. 401,639.

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Wetting Agents in Antiseptics

The "Influence of Wetting Agents on Various Antiseptics" is covered in an article by C. Virginia Fisher, appearing in the April issue of the *American Journal of Public Health.* The bacteriostatic and bactericidal effects of wetting agents alone and in conjunction with standard antiseptics is discussed. The following conclusion are drawn:

"The addition in dilutions of 1:1,000 of surface tension reducing substances, whether cationic, anionic, or neutral, enhance the bactericidal activity of mercury bichloride, mercury oxycyanide, chloramine T, argyrol, and potassium permanganate.

"Little or no increase in bactericidal activity was noted when these same substances were added to phenol, cresol, or tincture of iodine.

"No single wetting agent was equally effective in increasing bactericidal activity of mercurials, halogens, phenolic, silver protein, and oxidizing compounds.

"Compatibility of the wetting agent and the antiseptic is an important consideration."

PRICE CEILINGS . . .

The reasons behind price control as a means of avoiding inflation

*By P. L. Poirot**

Office of Price Administration

PRIOR to the outbreak of war in Europe in September, 1939, and for several months thereafter most of us acted as though the fighting of a war concerned us very remotely, if at all. Gradually at first, but with increasing speed, we have come to recognize that fighting and winning the war is our principal job. Perhaps we have different ideas,—I hope we do,—as to what action will be most effective in the accomplishment of that job.

Because some of you may disagree with the idea that price control action is necessary to win the war, I'd like to give you a summary of the reasoning behind that action before going into a detailed description of it. General price control is a part, and a vital part, of a larger Government program for total control of inflation during the war. This larger program includes, as well, a national wage policy, a national profit policy, a national tax policy, and a national savings policy—in short, it includes all measures required to bring consumer purchasing power into balance with the supply of goods available for consumption. General price control is a cornerstone of this larger program. It means stabilization of the cost of living and without that stabilization the balance of the program cannot succeed.

In order that we may outproduce the Axis powers, which we must do to win, we must devote the largest possible proportion of our raw materials, plant capacity and labor force to the war effort. This means curtailed production of many peacetime consumers' goods. There must be a lower standard of living and sacrifice at home if the "men over there" are to function most effectively.

When the war started in Europe, business in the United States was depressed. Plants were idle, men unemployed. Therefore, we were able to start production of war goods and at the same time maintain, or even increase for a while, the rate of production of consumer goods. This "honeymoon" period has passed, our stocks of consumers' goods are being depleted, and we have entered a period of all-out war effort.

War puts men to work. They work more hours and get more pay. The spending power of labor as a group grows rapidly. Increased demand for goods raises the incomes of the farm and industrial producers of those goods. The total income available in the nation for expenditure on consumers' goods increases sharply.

But the work which has produced the larger incomes has not provided consumers' goods enough to allow the expenditure of that income at prices which had prevailed. The government has been buying ships and planes and tanks and munitions, making more money available. The stage is set for an inflationary spiral of prices. Most of us can remember why inflation is undesirable. Some of us need an occasional review of the reasons.

On the military front rising prices make difficult the administration of war priorities and allocations. Materials needed for war production slip away to non-essential lines of production where rising prices promise large profits. Skilled labor and industrial facilities are also tempted to slip away. Speculation and hoarding is encouraged. Industry and government cannot plan and budget effectively unless assurance can be given within reasonable limits as to what costs and prices are going to be. Rising prices increase the cost of war. The government is spending the money now, but eventually we must recognize that we are the government and we will have debts to pay. To borrow money when prices are high and pay it back when prices are low is poor business.

On the civilian front, in Chicago, in your home town, everywhere, rising prices create maladjustments, affecting in varying degree the factors of production. Harsh and unjust sacrifice is imposed upon persons of fixed income. The value of savings is reduced; insurance policies no longer afford adequate protection to your dependents. But those reasons are unimportant. The real aim in stopping inflation is to avoid the losses, bankruptcies, foreclosures and suffering of the period of deflation which experience tells us will follow drastic inflation.

If there were any assurance that inflation would lead to increased production of war goods, there would be no effort to fight inflation. Some price advance was necessary following September, 1939 to lure idle industrial facilities, raw materials and labor into maximum production. With that accomplished, further price rise means

*Address before the 28th annual mid-year meeting of the Natl. Assn. of Insecticide & Disinfectant Mfrs., Chicago, June, 1940.

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only higher living costs, higher wages, higher parity levels for farm products, higher costs of production, higher prices and useless confusion of the economic structure.

Inflation could be controlled by taxation. If taxes heavy enough to pay for a large part of fighting the war, as we fight it, could be levied, our spending power would not exert an inflationary strain upon the prices of consumer goods available for us to buy. Heavier taxes are being imposed.

Likewise, public investment in war bonds voluntarily, or through a forced saving program, would reduce consumer spending power, providing war bonds were not used as cash by their holders. We are buying more defense bonds.

The government's inclination to tax and our inclination to save is not quite sensitive enough to the action of inflation to stop that action. To slow it down is insufficient. The Office of Price Administration has placed a lid on the boiling pot of inflation. Until the forces that feed the flame can be subjected to control, the pressure beneath that lid is going to seem quite oppressive.

On April 28, 1942, the Office of Price Administration issued the General Maximum Price Regulation freezing the prices of most commodities, not previously subjected to price regulation, at levels no higher than the highest prices at which deliveries had been made during the month of March, 1942. With a limited list of exceptions, prices of commodities were frozen across the board at every point at which sales were made, at the manufacturer as well as at the consumer level.

The maximum prices were established for sellers rather than for buyers. Each seller of a commodity is permitted under the regulation to sell to any class of purchaser at a price as high as the highest price at which he made delivery of the same commodity to a purchaser of the same class during March. If no deliveries were made his highest offering price for March delivery applies. Other alternatives include pricing according to the price of the most nearly similar commodity, competitors' price, an official formula designed to yield a fair margin to the seller, or a maximum price to be established by the administrator under supplementary regulations.

At the time the General Maximum Price Regulation was issued, it was recognized by the Office of Price Administration that maximum prices of certain seasonal commodities, not generally sold in March and not similar to any commodity which was sold in March would have to be established by supplementary regulations.

On May 13, 1942, Maximum Price Regulation No. 142 established maximum retail prices for summer seasonal commodities. Not included at the time of issuance, but added by amendment on May 16, were household insecticides. This regulation establishes maximum prices for sales at retail as the sellers' average cost of the commodity or his replacement cost after May 11, 1942, whichever is lower, plus the average percentage markup taken by the seller on the same commodity during his last selling season.

On May 16 Maximum Price Regulation No. 144 established maximum retail prices of agricultural insecticides and fungicides. The seller if not a manufacturer is to add to his replacement cost of a commodity after May 11 a markup equal in dollars and cents to the margin between cost and selling price obtained by him during the month of largest deliveries to consumers in the last selling season.

It is the inflexible determination of the Office of Price Administration to hold retail prices to a level no higher than the highest price charged by individual sellers during March. In order to do that job, the cooperation of consumers, of retail sellers, of wholesalers and of manufacturers is required. In some instances it will be necessary to roll back prices at the manufacturers' level or the distributors' level, cutting down on any margin that seems at all juicy.

Where a squeeze is created, it is expected that industry will voluntarily do all that is possible to relieve the pressure. The Office of Price Administration may have to explain and point out possibilities which industry has overlooked. The government is not interested in maintaining for any industry or part of that industry unreasonable profits which may have existed in the past, simply to boost collections of excess profit taxes. Nor is there any intent to entirely eliminate profits from industry.

Economies will be necessary. Raw materials must be used conservatively. Certain types of containers will be restricted or unavailable, which may result in some standardization of packages for the insecticide industry, with consequent reduction of costs. The business man who is able to produce the most goods at the lowest cost is going to be most successful. Neither the war nor the Office of Price Administration has changed that truth.

◆

NAIDM Registration

(*From Page 97*)

U. S. Public Health Service, Dr. J. E. Dunn, P.A. Surgeon, Washington, D. C.
U. S. Public Health Service, Fred L. Knowles, Memphis, Tenn.
U. S. Dept. of Agriculture, Dr. C. C. McDonnell, In Charge, Insecticide Division Agricultural Marketing Administration, Washington, D. C.
U. S. Dept. of Agriculture, Dr. E. R. McGovran, Bureau of Entomology & Plant Quarantine, Beltsville, Md.
U. S. Dept. of Agriculture, Dr. R. C. Roark, In Charge, Insecticide Investigations, Bureau of Entomology & Plant Quarantine, Washington, D. C.
War Production Board—Melvin Goldberg, Inorganics Section, Chemicals and Allied Products Branch, Washington, D. C.
War Production Board—Donald C. Knapp, Chemicals Branch, Washington, D. C.
War Production Board—Dr. Julian H. Toulouse, Container Division, Washington, D. C.
War Production Board—Robert S. Solinsky, Washington, D. C.
Office Price Administration, Dr. Paul L. Poirot, Washington, D. C.
Department of Agriculture, Canada, Mr. A. M. W. Carter, Inspection Assistant, Ottawa, Canada
Interstate Commerce Commission, Geo. M. Jackson, Assistant to the Director, Washington, D. C.
Chicago Board of Health, Major Joel I. Connolly, Assistant to the President, Chicago, Ill.
Ohio State University, Dr. F. L. Campbell, Professor of Entomology, Columbus, Ohio.
University of Wisconsin, Dr. Ed M. Searls, Madison, Wis.
Illinois State Natural History Survey, Bernard G. Berger, Assistant Entomologist, Urbana, Ill. C. W. Kearns, University of Illinois, Urbana, Ill. Carl J. Weinman, Special Research Assistant, Urbana, Ill.
National Sanitary Supply Association, Edmund C. Kratsch, Secy., Milwaukee, Wis.

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Allocation for Pyrethrum

PYRETHRUM was placed under complete allocation control by the terms of War Production Board Order M-179, issued by Director of Industry Operations James S. Knowlson, and effective since June 13. The order applies only to processors of pyrethrum, who in terms stripped of legal verbiage are the half dozen manufacturers of pyrethrum extract. They are instructed to send to Washington on the tenth of each month a list of the orders for pyrethrum which they have for the following month. Qualified uses are for the Army and Navy, agricultural purposes and for public health applications. No shipments are to be made by processors until specific approval has been given to the order by the government.

The complete text of the order follows:

SUB-CHAPTER B—DIVISION OF INDUSTRY OPERATIONS
PART 1286—PYRETHRUM

General Preference Order M-179

The fulfillment of requirements for the defense of the United States has created a shortage in the supply of pyrethrum for defense, for private account, and for export; and the following order is deemed necessary and appropriate in the public interest and to promote the national defense:

Section 1286.1 *General Preference Order M-179 (A) Definitions.*

(1) "Pyrethrum" means pyrethrum flowers and the powder, dust, or extract derived therefrom.

(2) "Producer" means any person engaged in the importation or sale of pyrethrum flowers or in the processing of pyrethrum flowers to make any powder, dust, extract, or other pyrethrum-containing material.

(B) *Restriction on Deliveries.* (1) No producer shall make delivery of pyrethrum to any person unless and until he shall have been authorized or directed to do so by the Director of Industry Operations. Prior to the beginning of each calendar month beginning with July, 1942, the Director of Industry Operations will issue to all producers specific authorizations or directions covering deliveries of pyrethrum. In addition, such director may issue during any month (including the balance of June, 1942) such authorization or directions concerning deliveries as he may deem appropriate or necessary and he may also issue directions respecting the use or uses to which the pyrethrum whose delivery is authorized hereunder may be put. Such authorizations or directions will be based primarily upon insuring the satisfaction of all defense requirements and, in so far as possible, providing an adequate supply for essential uses. Each producer, upon being informed by the Director of Industry Operations of the deliveries which such director has authorized or directed, shall forthwith notify his customers of the extent of such authorization or direction as the same may affect them.

(2) In the event that any producer, after receiving notice from the Director of Industry Operations with respect to a delivery of pyrethrum which he has been authorized or directed to make to any specific customer during any month, shall be unable to make such delivery either because of receipt of notice of cancellation from such customer or otherwise, such producer shall forthwith give notice of such fact to the Chemicals Branch of the War Production Board, and shall not in the absence of specific authorizations or directions from the Director of Industry Operations resell or otherwise dispose of the pyrethrum which he is unable to deliver as aforesaid.

(3) No person shall deliver any pyrethrum except upon receipt of a certificate of the person purchasing or accepting delivery, in substantially the following form (which certificate may be indorsed on or accompany the order for pyrethrum):

"I hereby certify the War Production Board and to the seller or supplier to whom this certificate is presented that the pyrethrum hereby ordered is for use as ..... and will not be used, sold, transferred or delivered by me for any other purpose. This certification is made in accordance with the terms of Order No. M-179 with which I am familiar.

"(Name of Purchaser) .....
"By (Name and title of authorized official) .....

The seller or supplier shall be entitled to rely on such certificate unless he knows or has reason to believe it to be false.

(C) *Placing of Orders and Scheduling of Deliveries.* Each producer of pyrethrum shall on or before the 10th day of each month beginning with July, 1942, file with the Chemicals Branch, War Production Board, Washington, D. C., Form PD-591 in triplicate, properly executed, which shall list among other things a schedule of deliveries of pyrethrum which such producer proposes to make in the succeeding month and the amount estimated to be available for delivery by him during such month. After such forms have been filed with the Chemicals Branch any material change of circumstances pertaining to said PD-591 shall forthwith be reported to such Chemicals Branch.

(D) *Inventories Restrictions.* No producer shall knowingly make, and no person shall accept delivery of pyrethrum if the inventory thereof of the person accepting the delivery is, or will by virtue of such acceptance, become in excess of a 30 days' supply in terms of orders received by such person for his finished products, on the basis of his current method and rate of operations, but this paragraph shall not be construed to prevent a person's accepting delivery thereof in the smallest practicable delivery unit as evidenced by his past experience.

(3) *Miscellaneous Provisions.*

(1) *Notification of Customers.* Producers shall, as soon as practicable, notify each of their regular customers of the requirements of this order, but failure to give such notice shall not excuse any person from the obligation of complying with the terms of this order.

(2) *Applicability of Priorities Regulation No. 1.* This order and all transactions affected thereby are subject to provisions of Priorities Regulation No. 1 (part 944), as amended from time to time, except to the extent that any provision hereof may be inconsistent therewith, in which case provisions of this order shall govern.

(3) *Communications to War Production Board.* All reports required to be filed hereunder, and all communications concerning this order, shall, unless otherwise directed, be addressed to: War Production Board, Chemicals Branch, Washington, D. C., Ref.: M-179.

(4) *Violations or False Statements.* Any person who wilfully violates any provisions of this order or who in connection with this order wilfully conceals a material fact or furnishes false information to any department or agency of the United States, is guilty of a crime, and upon conviction may be punished by fine or imprisonment. In addition, any such person may be prohibited from making or obtaining further deliveries of, or from processing or using material under priority control and may be deprived of priorities assistance.

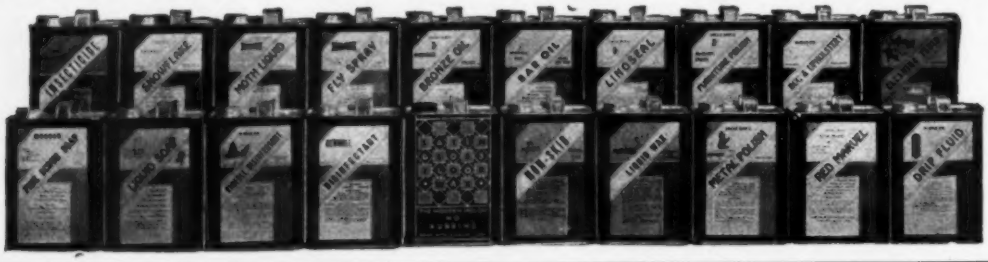
Issued this 13th day of June, 1942.

J. S. KNOWLSON,
Director of Industry Operations

American Consolidates Sales Forces

In a move to consolidate its sales forces, American Can Co. announces that effective July 1st, the administration of both packers can and general line sales, in the territory covered by the Atlantic Division Sales Office, will be through nine district sales offices. The former packers can district and general line and packers can local office territories will be discontinued and in their place nine new district territories will be established in New England, New York State, Metropolitan New York, North Jersey, Philadelphia, Pittsburgh, Baltimore, Richmond and the Southeastern Territories.

MANUFACTURERS FOR THE JOBBERS



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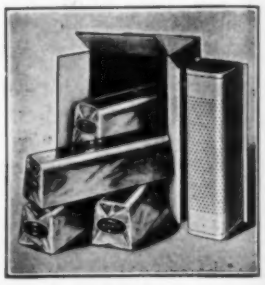

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NEWS

Lehn & Fink Collect Rubber

Lehn & Fink Products Corp., Bloomfield, N. J., has started a scrap rubber collection drive, and is paying employees 5 cents a pound for such rubber scrap as they bring in. The company will deliver the scrap to a government agency at the regulation 1 cent per pound figure.

Seek Container Data

Donald C. Knapp of the chemicals branch of WPB, who spoke to members of NAIDM on the container situation, at their recent Chicago meeting, has recently addressed a letter to the association office emphasizing the absolute necessity for conservation of steel and the restriction of use of steel containers for packaging of potash soaps, liquid soaps, insecticides, disinfectants, and allied sanitary chemical products. He has requested the association to attempt to obtain from its membership detailed reports on what substitutions members have been able to effect in the packaging of their products other than in steel containers.

Offer Insecticide "Paint"

Hanley & Kinsella Laboratories, St. Louis, has announced a new invisible insecticide "paint," for use on window and door screens in army cantonments and for the hotel and restaurant trade. It comes in 4, 8, 16 and 32-oz. packages and 1-gallon cans and is applied with a saturated cloth.

Heller Joins C. W. S.

Preston B. Heller of B. Heller & Co., Chicago, has just been inducted into active duty with the Chemical Warfare Service of the United States Army as a Lieutenant-Colonel. In consequence he has resigned his office as a member of the board of directors of the National Association of Insecticide & Disinfectant Manufacturers. This is the second member the board has lost to the Armed Services in recent months. Robert C. White of Robert C. White Co., Philadelphia, retired from the board a few months ago to enter the Navy.

PRESTON B. HELLER

Take Over Grady Polish

Oil Specialties & Refining Co., Brooklyn, has taken over the polish and cleanser business formerly conducted by Grady Manufacturing Co., L. I. City. The Grady line of polishes and cleansers, many items of which have been manufactured since 1880, will continue to be manufactured by Oil Specialties & Refining Co. The Grady organization will be operated as the Grady Polish Division of Oil Specialties & Refining Co., under the direction of William H. Weaver, a veteran of thirty-two years' service with the Grady organization.

New Bedbug Laboratory

All comparative laboratory tests of liquid insecticides against bedbugs have been made during recent years at the Ohio State University. As other existing laboratories are reluctant to use bedbugs as test insects and as the Ohio State University can no longer make routine tests, Dr. Frank O. Hazard, Professor of Biology at Wilmington College, Wilmington, Ohio, has set up a bedbug testing laboratory at the College with the approval and cooperation of Dr. F. L. Campbell of Ohio State University. Dr. Hazard's establishment is called "Insecticide Testing Laboratories," 218 North Spring Street, Wilmington, Ohio. His bedbug cultures are now ready for use and he has already made tests of commercial samples by the method preferred at Ohio State.

Weingard Leaves Penn Refining

A. B. Weingard, vice-president of the Pennsylvania Refining Co., Butler, Penna., producers of "Insectisol," insecticide base, who was associated with that firm for the past 20 years, resigned as of June 20 to become head of the Continental Refining Co., Oil City, Penna., also producers of petroleum products.

Restrict Shoe Dressing Claims

A group of 13 manufacturers and distributors of white shoe dressings signed a Federal Trade Commission stipulation, issued June 30, agreeing to abandon use of claims that their products "will not rub off." Actually these preparations will rub off to a limited degree under normal conditions of use, according to the FTC complaint. Other firms agreed to abandon claims that their products will cause shoes to become waterproof or restore the shoes to their natural color and finish.

Chemical Analysis of Rotenone

The Bureau of Entomology & Plant Quarantine, U. S. Department of Agriculture, has just published an 80-page book reviewing methods for the chemical analysis of rotenone-bearing plants. The author is Howard A. Jones, Division of Insecticide Investigations.

Amend Rotenone Order

Rotenone may be used as an insecticide in the treatment of cattle for grubs, but not as a germicide for citrus fruits, under the terms of an amendment to Conversation Order M-133 issued June 5. The Director of

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Industry Operations has ruled that citrus fruits may be adequately protected with insecticides other than those containing rotenone, while for use against cattle grubs acceptable substitutes are not available. This liberalization of the provisions of the order, allowing use of rotenone as a spray, wash or dust for the control of grubs, does not extend to use of rotenone for other cattle insecticidal purposes.

Allocate Chlorate Chemicals

Chlorate chemicals were placed under complete allocation control by General Preference Order M-171, issued June 1. After that date no deliveries will be allowed in excess of 10 pounds per month except upon authorization by the director of Industry Operations. Common uses of chlorate chemicals are in the manufacture of rust preventives, weed killers, and other chemical specialties.

Ampion Corp. Loses Payroll

Ampion Corp., Long Island City, soap and sanitary chemicals, were recent victims in a payroll robbery, losing several hundred dollars to two armed bandits. An employee, who was making his initial trip as a payroll carrier, reported that two young men followed him from a Woodside bank and took the payroll within a block of the Ampion plant.

Issue Folder on "Omnicide"

Superior Chemical Products Sales Corp., New York, has issued an illustrated folder, entitled "Have You A Rogue's Gallery?" to promote their "Omnicide" insecticide for household pests.

Automatic Chlorinator

A new model of the Valhalla Chlorinator designed for small-quantity production of sodium hypochlorite solution for use as bleach, for deodorizing toilet rooms, etc., is being marketed by Valhalla Co., Chicago. A solution of common salt is poured into the top tank. The brine flows by gravity and in controlled quantities through simple direct-current electric cells. Sodium hypochlorite solution is formed by electrolysis.

Brenn Scorches Huntington Roads

In Huntington, Indiana, the president of the Huntington Laboratories, Inc. pedals himself to and from the office daily. Six-foot-three J. L.

Brenn, photographed aboard his English racing bike, leaving his plant after a tough day. The large black object on the left pedal is Mr. Brenn's foot encased in a size 14 shoe. Mr. Brenn is chairman of the Huntington County O.C.D. and is reputed upon occasion to use this frail conveyance in the swift completion of his appointed rounds in connection with his duties.

Washburn Aids "Work-Study" Plan

T. F. Washburn Co., manufacturer of floor treatment materials, Chicago, is listed among 70 industrial concerns which are cooperating in a "work-study" plan in effect for students at Northwestern University's new engineering school, the Northwestern Technological Institute at Evanston, Ill. After spending his first year entirely in class room and laboratory work, the student, during the remainder of his five-year course alternates his time in periods of three months each between the campus and the industry of his choice, thus adding valuable work experience to his theoretical academic training.

Koppers Absorb White Tar

The White Tar Co. of New Jersey, Kearney, N. J., a subsidiary of Koppers Co., has just been absorbed by the parent company. It will operate in the future as the White Tar Division of Koppers Co. Operations and personnel will not be affected by the change in name. White Tar Co. was acquired by Koppers Co. in 1929. It manufactures disinfectants, naphthalene products, candles, garment bags, etc. R. C. Wickersham is local manager of the White Tar Division, with J. N. Forker, vice president of Koppers Co., as general manager of the division.

Restrict Sanitary Products Cans

New restrictions on containers for use in the packaging of fly spray, paste polish, paste waxes, dry disinfectants, dry cleaners and a series of other products were included in a supplementary order (M-81-a) to the Tin Conservation Order, issued June 13. The supplementary order provides that in the manufacture of cans for packaging the listed products all can manufacturers shall, to the greatest extent available, substitute chemically treated blackplate for tinplate and terneplate, for making the ends only of cans with soldered side seam, and for making the ends and the bodies of cans without soldered side seam. All canners accepting delivery of cans for packing such products are required to accept from the can manufacturer to the greatest extent available up to 100 per cent of the delivery, cans made of chemically treated blackplate. Tinplate or terneplate, as specified in Order M-81, may be used for making the tops of cans to which fittings or trimmings are soldered.

Roberson With Iorns Co.

V. L. Roberson, formerly sales manager of Pennsylvania Refining Co., Butler, Pa., is now associated with H. M. Chlanda in the operation of Clifford L. Iorns Co., St. Louis. Mr. Iorns who had operated this manufacturers' agency business for a number of years, died early this year.

Cut British Polish Sales

British manufacturers of wax polishes, creams and dressings for floors, furniture and shoes, have been ordered by the Board of Trade to restrict production after June 1, by 40 per cent. The restriction is on a value basis, and the standard period has been set as the six months ending November 30, 1939.

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Penick Jr. Heads Penick Co.

S. B. Penick, Jr., who has been executive vice-president of S. B. Penick & Co., New York, crude drugs and insecticide raw materials, has just been elected president of the company. S. B. Penick, Sr., founder of the firm in 1914 and former president, has been elected to the newly created office of chairman of the board. Mr. Penick, Jr., 37 years old, was graduated in 1925 from Princeton University where he was elected a member of Phi Beta Kappa, honorary scholastic fraternity. Starting work with the company immediately at one of the New Jersey plants, he has been continuously associated with the firm since that time. In addition to his duties with S. B. Penick & Co. he has been active in association work as well. He is at present serving as chairman of the Drug and Chemical Section of the New York Board of Trade and is a member of the board of governors of the New York Drug and Chemical Club. He has also served for several years past as secretary of the American Pharmaceutical Manufacturers' Association. The Penick firm, which occupies a leading world position in the botanical drug field, has some 600 employees in its general offices and in its plants and branches throughout the country.

S. B. PENICK, JR.

S. B. PENICK, SR.

Earl Brenn Visits Huntington

Earl Brenn, son of J. L. Brenn and associated with the manufacturing department of the Denver, Colorado, plant of the Huntington Laboratories, was a visitor to the main offices of the company at Huntington, Indiana, early in June. He spent two weeks in Huntington and Chicago accompanied by Mrs. Earl Brenn and their small daughter. J. L. Brenn is president of the Huntington Laboratories.

Concannon Durable Goods Chief

Charles C. Concannon, consultant on chemicals for the U. S. Department of Commerce, has just been named chief of the durable goods and materials unit of the Bureau of Foreign & Domestic Commerce. Mr. Concannon will continue his work in the chemical field while also supervising the department's activities in a long list of durable goods and materials.

Dr. Dreyfus at Battle Creek

Dr. William Dreyfus, well-known technical director of the West Disinfecting Co., Long Island City, N. Y., left June 28 to spend a month at the Battle Creek Sanatorium, Battle Creek, Mich. for a rest and physical check-up. Dr. Dreyfus, a pioneer in disinfectant manufacture in the U. S., celebrated his 73rd birthday on June 17 last.

Certified Supply Co. Moves

Certified Supply Co., dealers in janitor's supplies, have recently occupied new quarters at 55 W. 42nd St., New York.

Flies as Food Poisoners

Attention is directed to the dangerous role of the house fly in the spreading of food poisoning in a recent report by Morris Ostrolenk and Dr. Henry Welch of the U. S. Food and Drug Administration appearing in the *American Journal of Public Health*. Flies fed on food infected with a food poisoning germ can, they found, infect other flies as well as the food and water with which they come in contact. The studies point to a serious danger to people who eat food prepared or served in such a way that flies have access to it.

Lift Natural Resin Curbs

Restrictions on the use of natural resins for a number of surface coating uses were removed by an amendment to General Conservation Order M-56 issued June 5 by the Director of Industry Operations. The original restrictions were imposed by the WPB in the belief that supplies were not sufficiently large to meet demand. Further investigation has indicated, however, that supplies are sufficient to last three to four years. It developed, too, that shortages of linseed oil and other ingredients for use with natural resins in the manufacture of floor finishes, house paints, etc., had already imposed effective restrictions on natural resin use so that the governmental curbs could be modified with safety.

The order as amended still prohibits the use of natural resins in barn paints, freight car paints, and road marking paints (except that ½ pound of Batu gum per gallon may be used in road marking paints). These items are considered by the WPB as relatively non-essential, use large quantities of natural resins, and can be made equally well with cruder materials.

Uhe Joins Sanitary Corps

George Uhe, head of George Uhe Co., New York, chemical and essential oil brokers, was recently appointed a first lieutenant in the sanitary corps, U. S. Army. He reported for duty June 30. The business will be continued during his absence.

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J. L. Clark Dies

J. L. Clark, chairman of the board of Dr. Hess & Clark, Inc., Ashland, Ohio, died June 26 in that city after a prolonged illness. Funeral services were held at his home in Ashland with Dr. Paul P. Anspach of the Trinity Lutheran Church of which Mr. Clark was a member, officiating. Burial was in the Ashland Cemetery. Although Mr. Clark had been in ill health for some time, he was active in the affairs of the Hess & Clark business until recently.

Born on a farm near Ashland on Sept. 18, 1869, J. L. Clark spent most of his life in and around that city, having been associated early in his business career with the F. E. Myers & Bro. Co. as a traveling representative. Subsequently he purchased a half interest in the stock food business which had just been started by the late Dr. Gilbert Hess. While Dr. Hess supervised manufacturing in the early days, Mr. Clark traveled as representative of the firm selling their line of stock foods and cattle remedies, and the business grew into one of the largest of its kind in the country. With the death of Dr. Hess in 1923, Mr. Clark purchased the Hess interest in the firm and later H. M. Clark and D. E. Clark, his sons, became associated with the business. The company also established and operates a large experimental farm on the outskirts of Ashland.

J. L. Clark was widely known in Ohio for his philanthropies and civic leadership. He was president of the Farmers Bank in Ashland, a trustee of Ashland College, chairman of the Red Cross Chapter of his city, leader of the Ashland Community Chest, active in Boy Scout and Y.M.C.A. affairs, and for some years superintendent of the Trinity Lutheran Sunday School. Although it was not generally known, the present Ashland Hospital was a gift by Mr. Clark to that city thirty years ago.

Surviving Mr. Clark are his wife, Mary Swineford Clark, and four children, Mrs. Thomas Casey of Fairhaven, Mass.; Mrs. Robert Ingmand of Ashland, and H. M. Clark and D. E. Clark, the latter two being respectively president and treasurer of Dr. Hess & Clark, Inc.

Chas. Hermann Joins Prentiss

Charles Hermann, in charge of the heavy chemical and import division of McKesson & Robbins, Inc., for

CHARLES HERMANN

a long period of years, will shortly join R. J. Prentiss & Co., New York, as vice-president in charge of chemicals, gums and allied lines. Mr. Hermann has long been a well-known figure in the drug and chemical trade. The Prentiss firm is headed by Richard Prentiss whose first connection with the drug industry was as a member of the staff of J. L. Hopkins Co. a number of years ago. He left Hopkins to join W. Benkert & Co. about 1921, taking over direction of the firm in 1927. The firm name was changed to R. J. Prentiss & Co. in 1933 and its activities considerably broadened. It was at this time that Harold King joined the firm in charge of the drug division. The firm has substantially expanded its position in the field of insecticide raw materials since then.

Urge Coal Buying Now

Industrial users of coal have been urged by Chairman Nelson of the War Production Board to place coal orders for future use as early as possible, so that available carrying capacity of the railroads can be used most efficiently. He warns that serious transportation difficulties may occur in the fall and winter months unless stock piles are built up in advance.

Review Little-Used Insecticides

A pamphlet has been issued by the U. S. Dept. of Agriculture, discussing a number of new or little-used insecticide raw materials described as worthy of further testing. It was prepared under the direction of Dr. R. C. Roark, Division of Insecticide Investigations. The new publication observes that many compounds similar to paris green have been prepared by substituting other organic acids for acetic acid. Suggested uses for some of these compounds are given, and reports are made on toxicity of the different materials against various agricultural pests. The publication has been issued by the department under the serial No. E-564.

Fly as Polio Carrier

Additional evidence pointing to the possibility that the house fly may be a common carrier of poliomyelitis is contained in an article by Drs. Albert B. Sabin and Robert Ward, Children's Hospital Research Foundation, Cincinnati, which appeared in the December 19, 1941, issue of *Science*. Writing under the title "Flies as Carriers of Poliomyelitis Virus in Urban Epidemics," the authors report that from flies caught in sixteen different urban sites in Atlanta and Cleveland during polio epidemics, five positive results have been obtained on test.

Restrict Sales Calls

Fritzsche Bros., Inc., New York, essential oils and perfuming materials, have advised their customers that as a move to assist in the program of conservation of gasoline, automobile tires, etc., their sales representatives will for the duration of the war call on their accounts much less frequently than in the past. Their announcement emphasizes that they are continuing to maintain their laboratory and other facilities at the same level of efficiency as in the past.

Garn Chem. Products Move

Garn Chemical Products Co., chemical specialties, have just moved from Los Angeles to Salt Lake City. In the latter city the new quarters are located at 1125 Washington Ave.

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Offer New Specifications for Furniture Polish, Auto Polish Floor Sealer, Carnauba Wax

NEW federal specifications have been approved by the Director of Procurement of the U. S. Treasury Department for liquid automobile polish (P-P-546), liquid furniture polish (P-P-552), lacquer type floor sealer for oiled wood floors (TT-S-171) and carnauba wax (JJJ-W-141) and amendments have also been announced to the previous specifications for water emulsion floor wax (P-W-151a) and liquid and paste soap for automobile, floor and general cleaning (P-S-598). Copies of the new specifications are available at 5 cents each from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. They are all scheduled to go into effect on September 15, 1942, but may be put into effect at an earlier date.

Liquid automobile polish is to be of one type and grade, suitable for use on lacquer, baked enamel and synthetic enamel finishes, and without objectionable odor. It shall be a stable aqueous emulsion containing a suitable abrasive in suspension. It shall be a free flowing liquid that can readily be applied with a cotton cloth and shall spread easily. Non-volatile matter (total solids) shall be not less than 25 per cent by weight. Ash content (based on non-volatile matter) shall be not less than 35 per cent nor more than 50 per cent by weight. Free caustic alkali, none. Neutralization number not more than 5. All the material shall pass through a No. 200 sieve and not less than 95 per cent (based on ash content) shall pass through a No. 325 sieve. Volatile matter shall be essentially water. Physical and performance tests are also specified.

Liquid furniture polish is to be of one type and one grade, free from abrasives, without objectionable odor and suitable for use on finishes on wood and metal furniture. It shall be a stable colloidal emulsion of oil in water, free flowing so that it can readily be applied with a cotton cloth and easily spread. Non-volatile matter shall be not less than 40 per cent by weight, the non-volatile being essentially a well refined petroleum oil. Ash content shall be not more than 1 per cent by weight. Free caustic alkali, none. Volatile matter shall be essentially water. Saponification number shall be not more than 30. Physical and performance tests are specified.

Lacquer type floor sealer shall be of one type and one grade. It shall satisfactorily seal the pores of the wood, leaving the surface in such condition as to provide a satisfactory foundation for a finishing material such as varnish, liquid or paste wax or water-emulsion wax. It shall be furnished "natural" in color and shall have sufficient fluidity to permit application with a bristle brush or lamb's wool mop. It shall be a clear fluid, free from sediment or suspended matter and shall be of such fluidity that no further thinning will be required. Non-volatile matter not less than 14 per cent. Shall set to touch in not more than 15 minutes and dry hard and tough in not more than 3 hours. Not less than 20 per cent by weight of the non-volatile content shall be nitrocellulose. An air-dried film on metal shall withstand rapid bending over a rod one-eighth inch in diameter. Viscosity not more than 0.220 poise. Performance tests are also specified.

Carnauba wax shall be furnished in one type and in two grades —Yellow-green and Commercial "No. 3 North Country." Unless otherwise specified it shall be furnished in lump form free from fine material or sweepings. It shall be hard, brittle and possess the characteristic agreeable odor. It shall be free from adulterants. The color of grade 1 wax shall be not darker than yellow-green. Unless otherwise specified, there are no color requirements for grade 2 wax. Other detail requirements are shown in the table below.

The water emulsion floor wax specification has been amended, superseding the old specification P-W-151. (See 1942 Soap Blue Book, p. 170.) In the new specification only one grade has beeen provided for, with the concentrated form being eliminated. In the requirements for the regular type an additional provision has been included fixing the wax content of the total solids as not less than 65 per cent by weight. Softening point has been changed to 77° C. from the previous 80° C. Maximum ash content has been raised to 3.5 per cent from the previous mark of 3.0 per cent. A requirement setting maximum water solubility at 15 per cent has been dropped. Physical and performance tests have been added.

The amendment to the specification for liquid and paste soap (P-S-598), covers merely a few minor items, chiefly typographical corrections.

—— ♦ ——

Anderson-Prichard Sales Session

Anderson-Prichard Oil Corp., Oklahoma City, Okla., held a technical sales meeting at Chicago, June 13, to acquaint jobbers, division managers, sales engineers and technical representatives with a series of recent technical developments and new products.

Carnauba Wax Detail Requirements

	Grade 1		*Grade 2*	
	Min.	*Max.*	*Min.*	*Max.*
Softening point, °C	83	—	83	—
Saponification number	78	85	70	90
Acid number	—	6	—	10
Volatile matter, per cent by weight	—	1	—	1
Ash, per cent by weight	—	0.1	—	3
Matter insoluble in carbon tetrachloride, per cent by weight	—	1	—	4

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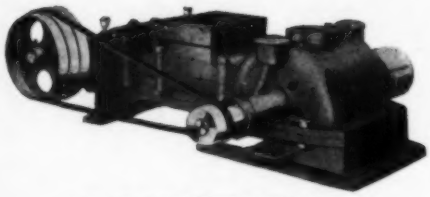

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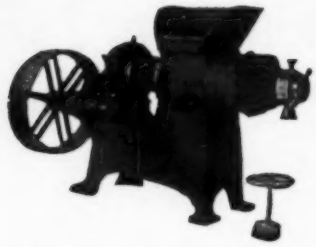

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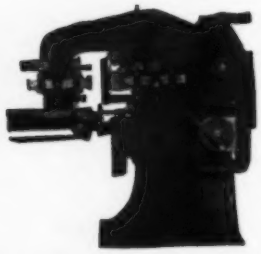

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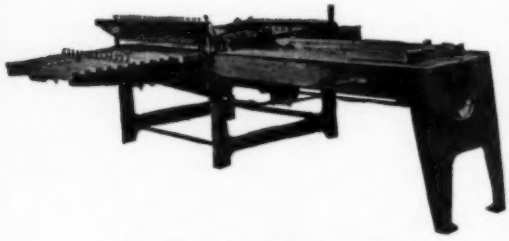

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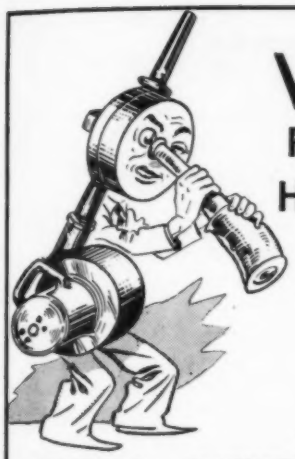

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Every effort is made to keep this index free of errors, but no responsibility is assumed for any omissions.

"You always wanted to go to sea, Cuthbert, and right now I begs to announce that you is no place else!"

. . . at sea?

ARE you at sea as to what to do next? Has the rapidity and seriousness of war-time developments hit you hard? If so, in this present world of uncertainty and confusion, there is one important thing not to do next. Do not lose your identity! Do not let the present mad scramble push your firm name and brands out of the picture! Keep your name constantly before your customers and prospective customers. Do not give them a chance to forget you!

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A LOUISVILLE soaper is not waiting for the household grease collection program to get under way. To restaurant operators and householders, he has announced an offer of one-half pound of household soap in exchange for every pound of grease,—and freight paid for lots of over 100 pounds shipped in from up-country.

* * *

And in a circular recently sent out by this same Kentucky soap maker, he takes a shot at home-made soaps, terming them "a gummy mess." All-told, it's a clever and well written advertising piece. Put out by Berry-Zink of Louisville, Ky.

* * *

No soaps yet with wrappers in red-white-and-blue or other patriotic motif? We haven't seen any. Neither have we seen any labels or stickers stating; "This soap contains no glycerine. All glycerine produced in making our soap is going for war uses."

* * *

Citing a formula for home-made soap used by New England farmers with some success and calling for some 3 per cent of borax, a soap chemist warns us that we had better publish the formula before some big chemical outfit takes out a patent on it as a "new, self-neutralizing, borated, buffered and built alkali metal salt." But who said borax soap is new? How long has Kirkman's been on the market?

* * *

Two reminders, first, if you want to keep up on all these new rules, regulations, orders, etc. of the WPB and OPA, be sure that you do not miss any issues of *Soap & Sanitary Chemicals*. If you receive a subscription renewal bill, send in your check promptly so that it will not be forgotten. Second,—if you want to check up on those new U. S. Government soap specifications,—which we mentioned last month,—effective July 15, look in pages 161 and 165 of your 1942 *Soap Blue Book*.

Headquarters

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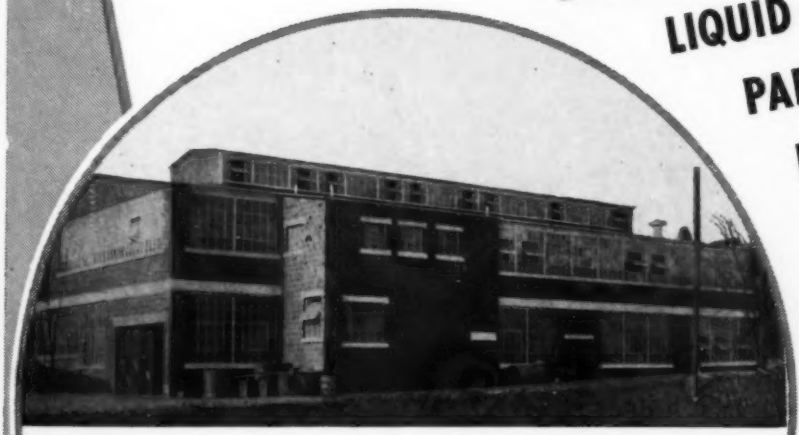

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